



2023



2024



Message from the President	3	Program List	36
University Calendar	4	Student Services and Learning Resources	39
About the University	6	<i>Administration and Finance Mission Statement</i>	39
<i>Mission Statement</i>	6	<i>Student Affairs Mission Statement</i>	39
<i>History</i>	6	<i>Business Services</i>	39
<i>Administration</i>	6	<i>Center for Global Engagement</i>	40
<i>James Madison University Administration</i>	7	<i>Center for Multicultural Student Services</i>	41
<i>JMU Alumni</i>	7	<i>Community Service-Learning</i>	42
<i>JMU Foundation</i>	8	<i>Counseling Center</i>	42
<i>Accreditation</i>	8	<i>Dean of Students</i>	43
Admissions	8	<i>Office of Disability Services</i>	43
<i>Visiting the University</i>	8	<i>Housing Accommodation Request Committee</i>	43
<i>First Year Student Admission</i>	9	<i>Office of Equal Opportunity</i>	43
<i>Transfer Student Admission</i>	9	<i>Honorary Societies</i>	44
<i>Advanced Placement</i>	10	<i>The Learning Centers</i>	44
<i>International Admission</i>	11	<i>JMU Libraries</i>	45
<i>International Examinations Credit</i>	12	<i>Office of Orientation and Transition</i>	45
<i>Special Admission Requirements</i>	16	<i>Public Safety</i>	45
<i>Credit for Military Service</i>	17	<i>Office of the Registrar</i>	46
Academic Policies and Procedures	17	<i>Office of Residence Life</i>	46
<i>Academic Affairs</i>	17	<i>Office of Student Accountability and Restorative Practices (OSARP)</i>	46
<i>Academic Standing and Continued Enrollment</i>	17	<i>Student Government Association</i>	46
<i>Adding a Course, Changing Sections or Changing Credit Options</i>	19	<i>Student Handbook</i>	46
<i>Attendance</i>	19	<i>Student Life</i>	46
<i>Auditing</i>	20	<i>Student Success Center</i>	47
<i>Catalog of Record</i>	20	<i>Title IX Office</i>	47
<i>Changes in Requirements</i>	20	<i>University Advising</i>	48
<i>Classification</i>	21	<i>University Career Center</i>	48
<i>Course Adjustment</i>	21	<i>University Health Center</i>	49
<i>Confidentiality of Educational Records</i>	21	<i>University Recreation</i>	50
<i>Credit Hours</i>	21	<i>University Unions</i>	50
<i>Credit Opportunities</i>	22	<i>Victim Advocacy Services</i>	50
<i>Final Examinations</i>	23	Tuition and Fees	51
<i>Grade Review Procedure</i>	23	<i>Billing and Registration</i>	51
<i>Graduation</i>	24	<i>Payment of Tuition and Fees</i>	51
<i>Grievance Procedure for Students</i>	25	<i>Collection of Past Due Accounts</i>	52
<i>Harassment</i>	26	<i>Setoff Debt Collection Act</i>	53
<i>Honor System</i>	26	<i>Eligibility for In-state Tuition</i>	53
<i>Inclement Weather or Emergency</i>	26	<i>Restriction on In-state Tuition</i>	53
<i>Major Information</i>	26	<i>Dependent Students</i>	53
<i>Misconduct in Research and Other Scholarly Work</i>	27	<i>Independent Students</i>	53
<i>Non-returning Students and Leave of Absence</i>	27	<i>Room and Board</i>	54
<i>Prerequisite and Eligibility Requirements</i>	27	<i>Refunds</i>	54
<i>Re-entry to the University</i>	27	<i>Room and Tuition Deposits</i>	54
<i>Registration</i>	28	Financial Aid, Scholarships and Student Employment	54
<i>Student Assessment</i>	28	<i>Scholarships, Grants and Loans</i>	54
<i>Semester Honors Lists</i>	28	<i>Grants</i>	56
<i>Students Seeking Second Baccalaureate Degrees</i>	28	<i>Student Loans</i>	56
<i>Student Teaching</i>	29	<i>JMU Scholarships</i>	57
<i>Transcript</i>	29	<i>Private Off-campus Scholarships</i>	57
<i>Transfer Equivalent Option Policy for Readmitted Students</i>	29	<i>Student Employment</i>	57
<i>Transfer of Credit from Other Institutions</i>	29	Colleges	58
<i>Undergraduate Grading System</i>	30	College of Arts and Letters	58
<i>Withdrawal from the University</i>	31	College of Business	60
<i>Academic Terms and Definitions</i>	31	College of Education	63
<i>Military Service</i>	32	College of Health and Behavioral Studies	67
Degree Requirements at James Madison University	36	College of Integrated Science and Engineering	68

College of Science and Mathematics	70	Pre-Occupational Therapy Minor	391
College of Visual and Performing Arts	74	Pre-Optometry Minor	392
Honors College	75	Pre-Pharmacy Minor	392
School of Professional & Continuing Education	75	Pre-Physical Therapy Minor	394
The Graduate School	76	Pre-Physician Assistant Minor	395
University Studies	77	Pre-Veterinary Medicine Minor	396
Academic Departments	77	Pre-Forensic Studies Advisory Program	397
<i>School of Accounting</i>	77	General Education: The Human Community	397
<i>School of Art, Design and Art History</i>	80	<i>American and Global Perspectives (formerly: Cluster Four: Social and Cultural Processes)</i>	398
<i>Department of Biology</i>	99	<i>Arts and Humanities (formerly Cluster Two: Arts and Humanities)</i>	399
<i>Department of Chemistry and Biochemistry</i>	111	<i>Madison Foundations (formerly Cluster One: Skills for the 21st Century)</i>	400
<i>Department of Communication Sciences and Disorders</i>	117	<i>Sociocultural and Wellness Area (formerly Cluster Five: Individuals in the Human Community)</i>	402
<i>School of Communication Studies</i>	121	<i>The Natural World (formerly Cluster Three: The Natural World)</i>	402
<i>Department of Computer Information Systems and Business Analytics</i>	135	Cross Disciplinary Minors	404
<i>Department of Computer Science</i>	141	African, African American and Diaspora Studies Minor	404
<i>Department of Early, Elementary and Reading Education</i>	146	American Studies Minor	405
<i>Department of Economics</i>	149	Asian Studies Minor	406
<i>Department of Educational Foundations and Exceptionalities</i>	161	Biochemistry and Molecular Biology Minor	407
<i>Department of Engineering</i>	167	Book Arts Minor	407
<i>Department of English</i>	170	British Communication and Media Minor	408
<i>Department of Finance and Business Law</i>	176	Chronic Illness Minor	408
<i>Department of Foreign Languages, Literatures and Cultures</i>	183	Classical Studies Minor	409
<i>Department of Geology and Environmental Science</i>	191	Climate Science Minor	410
<i>Hart School of Hospitality, Sport and Recreation Management</i>	200	Creative Writing Minor	411
<i>Department of Health Professions</i>	205	Criminal Justice Minor	411
<i>Department of Health Sciences</i>	209	Disability Studies Minor	412
<i>Department of History</i>	212	Entrepreneurship Minor	412
<i>School of Integrated Sciences</i>	217	Environmental Humanities Minor	413
<i>Department of Interdisciplinary Liberal Studies</i>	231	Environmental Information Systems Minor	414
<i>Department of International Business</i>	234	Environmental Management Minor	414
<i>Department of Justice Studies</i>	236	Environmental Science Minor	415
<i>Department of Kinesiology</i>	245	Environmental Studies Minor	417
<i>Department of Learning, Technology and Leadership Education</i>	249	Family Studies Minor	418
<i>Department of Management</i>	250	Film Studies Minor	419
<i>Department of Marketing</i>	254	Global Supply Chain Management Minor	420
<i>Department of Mathematics and Statistics</i>	258	Historical Archaeology Minor	421
<i>School of Media Arts and Design</i>	269	Humanitarian Affairs Minor	422
<i>Department of Middle, Secondary and Mathematics Education</i>	280	Latin American, Latinx and Caribbean Studies Minor	423
<i>Department of Military Science</i>	286	Latino Community Engagement Minor	424
<i>School of Music</i>	289	Legal Studies Minor	425
<i>School of Nursing</i>	303	Linguistics Minor	425
<i>Department of Philosophy and Religion</i>	308	Logic and Reasoning Minor	426
<i>Department of Physics and Astronomy</i>	317	Materials Science Minor	426
<i>Department of Political Science</i>	327	Medical Humanities Minor	427
<i>Department of Psychology</i>	342	Medieval and Renaissance Studies Minor	428
<i>Department of Social Work</i>	347	Middle Eastern Communities and Migrations Minor	429
<i>Department of Sociology and Anthropology</i>	350	Modern European Studies Minor	430
<i>School of Theatre and Dance</i>	363	Music and Human Services Minor	431
<i>School of Writing, Rhetoric and Technical Communication</i>	371	Non-Profit Studies Minor	431
<i>Adult Degree Program</i>	377	Political Communication Minor	432
Cross Disciplinary Program	385	Robotics Minor	432
Biotechnology, B.S.	385	Russian Studies Minor	433
Pre-Professional Health Advising	388	Science, Technology and Society Minor	434
Pre-Athletic Training Minor	388	Social Justice Studies Minor	434
Pre-Dentistry Minor	389		
Pre-Medicine Minor	390		

Social Studies Minor	435	Pre-Professional Programs	446
Sport Communication Minor	438	Centers	448
Substance Use Disorder Education Minor	438	Research and Outreach Programs	449
Urban and Regional Studies Minor	439	Course Descriptions	455
Women's, Gender and Sexuality Studies Minor	439	University Faculty	684
World Literature Minor	440	Your Right to Know	716
Youth Justice Minor	442	Non-Discrimination Statement	716
Pre-Professional Teacher Licensure	442		

Message from the President

Dear Student,

As a James Madison University student, you have many opportunities to make choices that will affect your success at JMU and your future life. Some of them will be made in organizational or social settings outside the classroom. Many of these choices, however, are important ones concerning your academic preparation at JMU. This document, the James Madison University 2023-2024 Undergraduate Catalog, is an important reference for you. This catalog offers a comprehensive view of academic life at JMU and the thousands of different courses available to you as you craft your learning experiences.

Take care in choosing your classes. You need to carefully select the necessary courses to fulfill your particular degree requirements and also consider other educational experiences as well. Challenge yourself as you make your decisions. Explore the world of knowledge and opportunities here at JMU. Remember: your educational foundation at James Madison University will help prepare you for all of life's opportunities.

Your intellectual enrichment and your collegiate experience will foster personal growth and include life-forming decisions. Enjoy your college days. I extend my best wishes to you for a wonderful and rewarding year at JMU.

Sincerely,
Jonathan R. Alger
President

University Calendar

2023 Fall Semester

August 23, Wednesday	Classes meet as scheduled.
September 12, Tuesday	Last day to withdraw from the university with cancellation of tuition charges and refund.
September 29 - October 1, Friday-Sunday	Family Weekend
October 10, Tuesday	First Block courses end.
October 12, Thursday	Second Block courses begin.
October 12, Thursday	Last day to submit an application for a Masters, Ed.S. or Doctoral degree if graduation requirements are to be met in May or August 2024.
October 16, Monday	Mid-semester grades due in the Office of the Registrar.
October 17, Tuesday	First Block course grades due in the Office of the Registrar.
October 18-22, Wednesday-Sunday	Fall Break (No Classes – University Offices Open)
October 27-29, Friday-Sunday	Homecoming
November 6, Monday	Registration begins for 2024 spring semester.
November 17, Friday	Comprehensive assessment results and scholarly documents are due to The Graduate School for December 2023 graduation candidates.
November 18, Saturday	Thanksgiving holiday begins.
November 27, Monday	Classes resume.
December 8, Friday	Last day of classes.
December 9-15, Saturday-Friday	Final examinations
December 15, Friday	Deadline for completion of course work for December graduates.
December 16, Saturday	December Commencement Ceremony.
December 18, Monday	Regular Semester and Second Block course grades due in the Office of the Registrar by 3 p.m.

Winter Session 2024 (Optional Session for Students and Faculty)

January 2 Tuesday	Winter session 1 (one-week) and Winter Session 2 (two-week) classes meet as scheduled.
January 6, Saturday	Winter Session 1 Final examinations.
January 8, Monday	Winter Session 3 (one-week) classes meet as scheduled.
January 9, Tuesday	Winter Session 1 Grades Due
January 12, Friday	Winter Session 2 and 3 Final Examinations
January 16, Tuesday	Winter Session 2 and 3 Grades Due

Spring Semester 2024

January 15, Monday	Martin Luther King, Jr. Holiday. (No Classes – University Offices Closed)
January 16, Tuesday	Classes meet as scheduled.
February 6, Tuesday	Last day to withdraw from the university with cancellation of tuition charges and refund. Student Assessment/Faculty Assistance (no classes 8 a.m.- 3: 55 p.m.) Evening classes (those beginning 3: 55 p.m. or later) meet as scheduled.
March 5, Tuesday	First Block courses end.
March 8, Friday	Mid-semester grades due in the Office of the Registrar.
March 11-15, Monday-Friday	Spring Break. Classes do not meet.
March 18, Monday	Classes resume. Second Block courses begin.
March 19, Tuesday	First Block course grades due in the Office of the Registrar.
March 25, Monday	Advance registration for 2024 summer session begins.
April 8, Monday	Registration begins for 2024 fall semester.
April 10, Wednesday	Last day to submit an application for a Masters, Ed.S. or Doctoral degrees if graduation requirements are to be met in December 2024. Comprehensive assessment results and scholarly documents are due to The Graduate School for May 2024 graduation candidates.
May 2, Thursday	Last day of classes.
May 3-9, Friday-Thursday	Final examinations.
May 9, Thursday	Deadline for completion of course work for May graduates.
May 9-11 Thursday-Saturday	Commencement Ceremonies
May 14, Tuesday	Regular Semester and Second Block course grades due in the Office of the Registrar by 3 p.m.

About the University

James Madison University is a public, comprehensive university and is the only university in America named for James Madison. The university places great emphasis on the quality of the undergraduate student experience in its bachelor's level programs and offers a complementary array of distinguished master's, educational specialist and doctoral programs aimed at meeting specific state and national needs. JMU provides a total education to students – one that has a broad range of the liberal arts as its foundation and encompasses an extensive variety of professional and pre-professional programs, augmented by a multitude of learning experiences outside the classroom. The value and quality of the JMU experience has been recognized repeatedly in many national publications.

Enhancing quality in student learning is a priority for JMU. A national study found that 81 percent of employers want colleges to place more emphasis on "critical thinking and analytic reasoning" and 75 percent want more emphasis on "ethical decision making" (Raising the Bar: Employers' Views on College Learning in the Wake of the Economic Downturn, AAC&U and Hart Research Associates (2010)). In 2013, JMU launched a major university-wide effort called Ethical Reasoning in Action with the purpose of teaching ethical reasoning skills to every student at the university.

First year students are introduced to Ethical Reasoning in Action during orientation, and exposure continues through campus programming, the General Education curriculum and courses in majors. It teaches students how to apply a set of reasoning skills to evaluate implications of different courses of action in their personal, professional and civic lives. Ethical Reasoning in Action ties directly to the university's mission of "preparing educated and enlightened citizens."

Mission Statement

We are a community committed to preparing students to be educated and enlightened citizens who lead productive and meaningful lives.

History

Since its establishment in 1908, James Madison University has grown from a small state normal and industrial school for women to today's coeducational comprehensive university with a Fall 2022 enrollment of 22,224 students. The university was founded in 1908 as the State Normal and Industrial School for Women at Harrisonburg, with Julian Ashby Burruss as its first president. The school opened its doors in 1909 with an enrollment of 209 students and a faculty of 15. Its first 20 graduates received diplomas in 1911. In 1914, the name of the school was changed to the State Normal School for Women at Harrisonburg. The school received authorization to award bachelor's degrees in 1916. During this initial period of development, Burruss' administration established the campus plan and constructed six buildings.

After Burruss resigned in 1919, Dr. Samuel Page Duke became the second president. Duke's administration erected nine major buildings. In 1924, the university became the State Teachers College at Harrisonburg and continued under that name until 1938, when it was named Madison College in honor of James Madison, the fourth president of the United States. In 1946, the Duke administration admitted men as regular day students.

Following the retirement of Duke, Dr. G. Tyler Miller became the third president of the university in 1949 and remained until 1970. Miller's administration enlarged the campus by 240 acres and constructed 19 buildings. The

administration also revamped the curriculum. In 1954, the expanding school received authority to grant master's degrees. The university became a coeducational institution and first enrolled Black students in 1966.

Dr. Ronald E. Carrier became JMU's fourth president in 1971. His administration transformed Madison College into a university. In 1977, the institution adopted its current name, James Madison University. The Carrier administration nearly tripled the number of students and university faculty members and constructed some 30 major campus buildings. Doctoral degrees were authorized in 1994. Dr. Linwood H. Rose was named JMU's fifth president in September 1998. Under his leadership, JMU was continually recognized in national publications as one of the nation's finest institutions of its type. More than 20 new academic programs were implemented, 25 major buildings were constructed, a Phi Beta Kappa chapter was installed and the university successfully completed its first capital campaign.

Jonathan R. Alger, JD, took office in July 2012 as the sixth president of James Madison University. Under his leadership, JMU developed a vision to be "the national model of the engaged university" with a strategic plan focused on engaged learning and community and civic engagement. In 2022, JMU's Carnegie classification was elevated to R2, establishing the university as a Doctoral University with High Research Activity, and the highly successful *Unleashed* comprehensive campaign raised over \$250M. Academic programs in education, health care and information technology expanded under his purview.

JMU has become a national model for high-impact learning practices, service learning, civic engagement and promoting access with programs such as Valley Scholars, and it was ranked as the "top college in Virginia for getting a job." The university has also expanded its focus on diversity, equity and inclusion to ensure that students of all backgrounds can attend and succeed at JMU.

Administration

The general responsibility for the administration of the university has been assigned to the president, who is appointed by the JMU Board of Visitors. When the board is in recess, its executive committee may exercise the power of the board.

Assisting the president in the administration of the university are the provost and senior vice president for academic affairs, the vice president for access and enrollment management, the vice president for administration and finance, the vice president for student affairs, the vice president for university advancement, the chief of staff, associate provost for diversity, associate vice president for diversity, equity and inclusion, associate vice president for university marketing and branding, associate vice president for wellness, orientation and multicultural engagement, dean of professional and continuing education, director of athletics, director of government relations, executive director for campus and community programs for access and inclusion, executive director of communications and university spokesperson, special assistant to the president for strategic planning and engagement, university counsel, vice provost for academic student success and enrollment management, vice provost for faculty and curriculum, and the vice provost for research and scholarship.

Appointment to these positions and to the university's instructional and administrative faculty is made by the JMU Board of Visitors upon the recommendation of the president.

James Madison University Administration

Board of Visitors

The Honorable Richard "Dickie" Bell, Staunton, VA
Teresa L. Edwards, Chesapeake VA
Christopher Falcon, Annandale, VA
Carly Fiorina, Lorton, VA
Maribeth D. Herod, Herndon, VA
John C. Lynch, Virginia Beach, VA
Lara P. Major, Purcellville, VA
Suzanne S. Obenshain, Harrisonburg, VA
John C. Rothenberger, Great Falls, VA
Steven C. Smith, Bristol, TN
Michael A. Stoltzfus, Bridgewater, VA
Jeffrey E. Tickle, Bristol, TN
Jack L. White, Fairfax Station, VA
Nicole P. Wood, Ashland, VA
Donna L. Harper (Secretary), JMU/Harrisonburg VA
Abigail N. Cannella (Student Representative), Poquoson, VA

Chief Administrative Officers

Jonathan R. Alger, J.D.
President

President's Cabinet

Jeffrey T. Bourne, M.S.
Director of Athletics
Malika Carter-Hoyt, Ph.D.
Vice President for Diversity, Equity and Inclusion and Chief Diversity Officer
Heather J. Coltman, D.M.A.
Provost and Senior Vice President for Academic Affairs
Arthur T. Dean, II, M.Ed.
Associate Vice President for Diversity, Equity and Inclusion
Hollie Hall, Ed.D.
Dean of Students
Donna L. Harper, Ed.S.
Vice President for Access and Enrollment Management
John F. Knight, J.D.
University Counsel and Senior Assistant Attorney General
Nicholas L. Langridge, Ph.D.
Vice President for University Advancement
Timothy M. Miller, Ed.D.
Vice President for Student Affairs
Rudy M. Molina, Jr., Ph.D.
Vice Provost for Student Academic Success and Enrollment Management

JMU Alumni

Office of Alumni Relations
Phone: (540) 568-6234
Website: <http://alumni.jmu.edu/>

The JMU Alumni Association (JMUAA) believes in the motto "Dukes from Day One, Alumni for Life." Representing more than 150,000 Dukes, the JMUAA endeavors to connect and serve all Alumni and to be the primary resource for Alumni engagement with James Madison University. The JMUAA also works to champion the achievements of our Alumni, and to build a culture of sustained

Towana H. Moore, M.B.A.
Vice President for Administration and Finance
Elizabeth Oldmixon, Ph.D.
Vice Provost for Faculty Affairs and Curriculum
Chris Orem, Ph.D.
Executive Director of Planning, Analytics and Institutional Research
Andrew D. Perrine, B.A.
Associate Vice President for University Marketing and Branding
Caitlyn L. Read, M.B.A.
Director of State Government Relations
Narketta Sparkman-Key, Ph.D.
Vice Provost for Strategic Initiatives and Global Affairs
Anthony Tongen, Ph.D.
Vice Provost for Research and Scholarship
Mary-Hope Vass, M.B.A.
Executive Director of Communications and University Spokesperson

Deans

Bethany Blackstone, Ph.D.
Dean, Honors College
Michael E. Busing, Ph.D.
Dean, College of Business
Rubén G. Graciani, M.F.A.
Dean, College of Visual and Performing Arts
Robert A. Kolvoord, Ph.D.
Dean, College of Integrated Science and Engineering
Mark E. L'Esperance, Ph.D.
Dean, College of Education
George F. Linder, Ph.D.
Dean, University Studies
Sharon E. Lovell, Ph.D.
Dean, College of Health and Behavioral Studies
Bethany P. Nowwiskie, Ph.D.
Dean, Libraries
Samantha Bates Prins, Ph.D.
Dean, College of Science and Mathematics
Nicholas J. Swartz, Ph.D.
Interim Dean, Professional and Continuing Education
Linda M. Thomas, J.D., Ph.D.
Dean, The Graduate School
Traci A. Zimmerman, Ph.D.
Interim Dean, College of Arts and Letters

investment in JMU, its students, and its community through Alumni time, talent, treasure, and testimony. Together, JMU Alumni across the globe give back to the university in various ways with the desire to continue growing the reach, impact, and reputation of our alma mater. The JMUAA has developed its strategic priorities with the intent to continue building on our previous successes, as well as to find new ways to connect and better serve our ever-growing membership.

The JMUAA is a non-dues based organization that operates in a unique interdependent model, where its work and resources as a non-profit

organization come from a network of Alumni volunteers that works collaboratively with the university's Office of Alumni Relations (OAR). Together, we give back to the university in ways that further the reach and reputation of the JMU we know and love.

Find out more about the JMU Alumni Association and upcoming events at <http://www.alumni.jmu.edu>.

JMU Foundation

Website: <http://www.jmu.edu/foundation/>

The James Madison University Foundation, Inc., a 501(c)(3) organization, was formed in 1969 to support the university — its students, faculty, staff, programs and facilities. The foundation receives, manages and stewards all charitable contributions for JMU. The foundation accepts gifts of cash, securities, real estate, personal property and more. The foundation's **MISSION** is to support and serve the James Madison University community. As we carry out that obligation, our **VISION**, is to provide an ever-growing and sustainable source of private support for the university community by promoting a prudent investment policy, stewardship and earning the trust of our constituents. As we seek to fulfill our ambitions, we are guided by an abiding commitment to the university, **VALUING** trust, collaboration, innovation, accountability and excellence in all we do.

Accreditation

James Madison University is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award baccalaureate, masters, educational specialist and doctorate degrees. Questions about the accreditation of James Madison University may be directed in writing to the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, GA 30033-4097, by calling (404) 679-4500, or by using information available on SACSCOC's website (www.sacscoc.org).

Additional Accreditation

ABET, Incorporated
AACSB International – The Association to Advance Collegiate Schools of Business
American Chemical Society
Accreditation Council for Education in Nutrition and Dietetics
Accreditation Council for Occupational Therapy Education
American Psychological Association Commission on Accreditation
Association for Information Technology Professionals
Association of University Health Programs in Health Administration

Accreditation Review Commission on Education for the Physician Assistant, Inc.

Commission for Collegiate Nursing Education

Commission on Accreditation of Athletic Training Education

Computing Accreditation Commission of ABET, Inc.

Council on Academic Accreditation in Audiology and Speech Language

Pathology of the American Speech-Language and Hearing Association

Council for Accreditation of Counseling and Related Educational Programs

Council for the Accreditation of Academic Programs for Speech Pathology and

Clinical Audiology

Council for the Accreditation of Educator Preparation

Council on Social Work Education (CSWE), Commission on Accreditation (COA)

International Association of Counseling Services

National Association of College and University Attorneys

National Association of School Psychologists

National Association of Schools of Art and Design

National Association of Schools of Dance

National Association of Schools of Music

National Association of Schools of Theatre

Network of Schools of Public Policy, Affairs and Administration

Review Commission on Education for the Physician Assistant

Virginia Board of Nursing

Membership

American Association of Colleges for Teacher Education

American Association of State Colleges and Universities

American Council on Education

Association of American Colleges and Universities

Association of Virginia Colleges and Universities

College and University Personnel Association

Council of Graduate Schools in the United States

Council of Southern Graduate Schools

National Association of College and University Business Officers

National Association of Student Personnel Administrators

Southeastern Universities Research Association

Southern Regional Education Board Doctoral Scholars Program

Institutional and Educational Membership

Association of Computing Machinery

Corporate Membership

American Association of University Women

Admissions

Office of Admissions

Phone: (540) 568-5681

Email: admissions@jmu.edu

Website: <http://www.jmu.edu/admissions>

Fax: (540) 568-3332

Location: Holland Yates Hall, MSC 0101

The enrollment for the university is authorized by the State Council of Higher Education for Virginia. The number of students admitted each year is limited by the resources available to the university.

Visiting the University

We encourage prospective students to attend a group information session and a walking tour of campus. To check our visitation schedule and make a reservation, visit our website.

First Year Student Admission

JMU's admission process is competitive. The admissions committee works to select the strongest candidates from a high-quality applicant pool. Our primary focus is on the applicant's academic history, which includes program of study, rigor of program and academic achievements. Optional items that contribute to the applicant's profile include standardized test scores, a letter of recommendation, extracurricular activities and a personal statement. Each applicant is rated in the following four areas, listed in order of importance:

Academic Program

Students who challenge themselves with the upper-level courses offered in their high school (i.e., Advanced Placement classes, International Baccalaureate, dual enrollment, in addition to Honors-level courses) increase their competitiveness. Although schools provide different opportunities, applicants should pursue the most demanding college preparatory programs available. Strong students come from different types of schools, therefore we evaluate applicants within the context of their high schools.

Competitive applicants should minimally have the following:

- Four years of math with at least one full year beyond algebra II (i.e. pre-calculus, trigonometry, discrete math, statistics, math analysis, etc.). Consumer math, personal finance, and algebra functions and data analysis will not be evaluated as a full year beyond algebra II;
- Three years of laboratory science (preferably biology, chemistry and physics or an AP, IB or DE science). General science or earth science does not count as a lab science);
- Three or more years of the same foreign language or two years of two different foreign languages;
- Four years of English; and
- Four years of social studies.

Students who challenge themselves with the upper-level courses offered in their high school (i.e. Advanced Placement classes, International Baccalaureate, dual enrollment, in addition to Honors-level courses) increase their competitiveness. Although schools provide different opportunities, applicants should pursue the most demanding college preparatory programs available. Because strong students come from different types of schools, we evaluate applicants within the context of their high schools.

Academic Achievement

To evaluate achievement in high school, we evaluate grades in the core subject areas: mathematics, English, foreign language, social studies and lab sciences. A competitive candidate will have mostly A's and B's in core courses. We look at performance throughout the entire high school career.

Standardized Tests

Submitting SAT I or ACT scores is optional and not required in order to complete the application.

Extracurricular Activities

We are looking for quality rather than quantity and consider the variety and depth of involvement in clubs, organizations and athletics. Community service and part-time jobs fall into the extracurricular category, also.

Application Deadlines

Early Action Admission

Early Action is non-binding early notification admission to qualified first-year student applicants. The deadline for early notification is November 1. Successful candidates will be notified in mid-January and must submit a tuition deposit by May 1 to enroll at the university. Most students who are not selected for early notification are considered under the university's regular admission process.

Students who apply Early Action do not have an advantage over students who apply Regular Decision.

Regular Decision Admission

Regular Decision is the final application deadline for first-year admission consideration. Applications must be submitted by January 15 to be considered for regular decision admission. Regular Decision is non-binding. All applicants will receive notification of their admission status by the first of April. Admitted students must submit a tuition deposit by May 1 to enroll at the university.

Application Procedure for First Year Student Admission

To apply for First-Year admission to the university, applicants must:

- Submit the online application for undergraduate admission along with the electronic application fee. This fee is not refundable or transferable and will not be credited to the student's account.
- Request that an official transcript from the high school counselor be sent electronically or through the mail to:
James Madison University Office of Admissions
MSC 0101
James Madison University
100 E. Grace Street
Harrisonburg, VA 22807
- (Optional) Applicants may request SAT or ACT scores be sent to James Madison University directly from the College Board or American College Testing, respectively.

Information furnished on applications and all other university documents and records must be accurate and complete without evasion or misrepresentation. Submitting inaccurate or incomplete documents is cause for rejection or dismissal from the university.

Transfer Student Admission

To transfer to JMU, a student should:

- Have completed or be in the process of completing at least 24 credits at the college or university level, after graduating from high school or earning a GED, at the time of application.
- Successfully complete college course work in the following areas: English, math, lab science and social science in order to be competitive. The more college-level course work a student completes, the less emphasis the admission committee places on the high school transcript.

- Be in good standing and eligible to continue or graduate from their previous institution(s). It is the student's responsibility to provide the JMU Office of Admissions with official transcripts of work completed from all colleges attended. Concealment of previous attendance at a college or university is cause for cancellation of admission and registration. (Students with holds on their academic records will not be considered for admission until holds are released).

The university recommends students have a "B" cumulative grade point average (3.0 on a 4.0 scale) to be competitive for admission.

Application Procedure for Transfer Admission

To apply for transfer admission to the university, applicants must:

- Submit the online application for undergraduate admission along with the electronic application fee. This fee is not refundable or transferable and will not be credited to the student's account.
- Request official transcripts be sent from all colleges attended prior to the application deadline.
- Submit an official high school transcript or a copy of a GED in addition to college transcripts, regardless of the number of college credits completed or the number of years out of high school.
- Indicate a major.
- (Optional) Complete a one-page personal statement for review by the Admissions Committee.

All materials are due by October 15 for spring admission, February 1 for summer admission and March 1 for fall admission.

Evaluation of Transfer Credits

Credit will be awarded for those courses equivalent to courses offered at JMU in which the student has earned a grade of "C" or better.

After the student has been approved for admission, the Office of the Registrar will evaluate the transcript(s) of each transfer student to show the credits accepted by the university. The academic unit head of the program in which the student is majoring will determine the credits required for graduation.

With the exception of some community college degrees in General Studies, JMU **General Education** requirements will be waived for those students who have completed either an Associate of Arts, Associate of Science, or Associate of Arts and Sciences degree at a Virginia community college. For the complete listing of degrees associated with a Virginia Community College that waive all General Education requirements, go to **Transfer Advising**. Students who complete one of these associate degrees and are offered admission will receive junior-level status; however, due to varying major and degree requirements, junior-level status does not guarantee graduation in two years. For more details, consult the Office of Admissions or the JMU Virginia Community College Transfer Guide.

Advanced Placement

Applicants for admission who have completed advanced work in secondary school may use AP test scores to apply for course credit at JMU. Information about AP exams is available at <https://apstudent.collegeboard.org/takingtheexam/about-exams>. Once AP credit has been posted to the transcript, it will not be removed unless it was posted in error, or the student subsequently repeats the course at JMU and earns a passing grade (D- or better). For a full list of available AP credit opportunities at JMU, refer to the Advanced Placement table.

Advanced Placement Chart

The score necessary to earn college credit at JMU, the corresponding course title at JMU and the credit hours which can be earned appear below. The grading scale is from one to five with five being the highest score. Credit hour equivalencies are reviewed annually by academic units.

2023-2024 Academic Year Advanced Placement Courses			
Placement Course	Minimum Required Score	JMU Equivalent	Credit Hours Earned
2-D Art and Design	4	ART 000 <i>or</i> ART 292	3
3-D Art and Design	4	ART 000 <i>or</i> ART 292	3
African American Studies	4	GNED 142	3
Art History	4	ARTH 206	3
Biology	4	BIO 140/BIO 140L & BIO 150/BIO 150L <i>or</i> ISAT 113,ISCI 104 & BIO 000 ²	8
Calculus AB	4	MATH 235	4
Calculus AB Subscore	4	MATH 235	4
Calculus BC	4	MATH 235 &MATH 236	8
Chemistry	4	Majors: CHEM 131 & CHEM 132	6
	4	Nonmajors: CHEM 131 & CHEM 131Land CHEM 132 & CHEM 131L-132L <i>or</i> CHEM 120 & CHEM 000 ³	8
	3	CHEM 120 and CHEM 000 ³ <i>or</i> ISCI 101 and ISCI 104	4
	4	Non majors: GEOL 115, ISCI 104& ISAT 000 ⁴	8
	4	ISAT major: ISAT 112 & ISAT 000 ⁴ To earn credit for ISAT 112, students must earn a 4 or higher on both the Environmental Science exam and the Chemistry exam.	
Chinese Language and Culture	4	CHIN 231	3

2023-2024 Academic Year Advanced Placement Courses			
Comparative Government	4	POSC 240	3
Computer Science A	5	CS 149	3
Computer Science Principles	3	CS 000	3
Drawing	4	ART 000 <i>or</i> ART 292	3
Economics (Micro)	4	ECON 201	3
Economics (Macro)	4	ECON 200	3
English Language and Composition	4	WRTC 103	3
English Literature and Composition	5	GNED 123 ⁶	3
Environmental Science	4	ISAT major: ISAT 112 & ISAT 000 ⁴ To earn credit for ISAT 112, students must earn a 4 or higher on both the Environmental Science exam and the Chemistry exam.	8
	4	Non majors: GEOL 115, ISCI 104 & ISAT 000 ⁴	8
	3	ISCI 000 ⁵	4
French Language or French Literature	4	FR 231	3
Geography, Human	3	GEOG 200	3
German Language	4	GER 231	3
Government: U.S.	4	POSC 225	4
History: U.S.	4	HIST 225	4
History: World	4	HIST 102	3
Italian Language and Culture	4	ITAL 231	3
Latin Vergil	4	LAT 231	3
Music Theory – Aural Subscore	5	MUS 143	1
Physics B	4	PHYS 140, PHYS 140L <i>and</i> PHYS 150, PHYS 150L	8
	3	ISCI 101 & ISCI 104 <i>or</i> PHYS 140 & PHYS 140L	4
Physics C: Mechanics	4	PHYS 240 & PHYS 240L	4
	3	PHYS 140 & PHYS 140L	4
Physics C: Electricity and Magnetism	4	PHYS 250 & PHYS 250L	4
	3	PHYS 150 & PHYS 150L	4
Physics 1	3	ISCI 101 & ISCI 104 <i>or</i> PHYS 140 & PHYS 140L	4
Physics 2	3	PHYS 150 & PHYS 150L	4
Psychology	4	PSYC 101	3
Spanish Language	4	SPAN 231	3
Spanish Literature	4	SPAN 231	3
Statistics	4	MATH 220 <i>or</i> ISAT 251	3

² BIO 000 does not count toward major or minor requirements in biology or toward general education requirements but is elective credit toward a degree.

³ CHEM 000 does not count toward major or minor requirements in chemistry or toward general education requirements but is elective credit toward a degree.

⁴ ISAT 000 does not count toward major or minor requirements in integrated science and technology or toward general education requirements but is elective credit toward a degree.

⁵ ISCI 000 does not count toward major or minor requirements or toward general education requirements but is elective credit toward a degree.

⁶ GNED 123 fulfills the Cluster Two Literature requirement.

International Admission

The Office of Admissions is responsible for the admission and enrollment of undergraduate international students. It also evaluates "A" Level examinations for academic credit.

Credit will be awarded for those courses equivalent to courses offered at JMU in which the student has earned a grade of "C" or better.

All non-U.S. citizens and nonpermanent residents of the U.S. must complete the international student application. This application and an international student information guidebook are available in the Office of Admissions, located in Holland Yates Hall.

In addition to regular first year student and transfer admission requirements, international students must present evidence of English proficiency and documentation of sufficient financial resources.

The university welcomes international applications and is authorized by federal law to enroll non-immigrant alien students. Requests for information concerning the admission of undergraduate international students should be directed to:

Office of International Admissions, MSC 0101
James Madison University
100 E. Grace Street
Harrisonburg, VA 22807
Phone: (540) 568-7865
<http://www.jmu.edu/admissions/apply/international.shtml>

International Examinations Credit

JMU will follow the recommendations of the National Council on the Evaluation of Foreign Educational Credentials when awarding academic credit based on international examinations. Questions regarding the evaluation of international examinations should be directed to the Office of Admissions.

Cambridge International Examinations and United Kingdom "A" Level Examinations

Students who participated in the Cambridge International Examination program or the United Kingdom "A" Level examinations may be awarded general education or other credit. Credit is evaluated by the appropriate academic unit. Once CIE credit has been posted to the transcript, it will not be removed unless it was posted in error, or the student subsequently repeats the course at JMU and earns a passing grade (D- or better).

For a full listing of available Cambridge International Examination courses and credit opportunities, refer to the table below.

2023-2024 Cambridge International Examination Courses

The grade necessary to earn college credit at JMU, the corresponding course title at JMU and the credit hours that may be earned appear in the Cambridge International Examination table. The acceptable grading scale is A, B, or C, although the acceptable grade for credit may vary between courses and the level of the exam taken. Credit hour equivalencies are reviewed annually by academic units.

<i>A-Level Exams</i>			
Cambridge International Exam	Accepted Grades for Credit	JMU Equivalent Course	Credit Hours Earned
Afrikaans – Language	A,B	FL 000	3
Arabic – Language	A,B	ARAB 231	3
Biology	A	BIO 103, ISCI 104,BIO 000	8
Biology	B,C	BIO 103, ISCI 104	4
Chemistry	A	CHEM 131, CHEM 131L, CHEM 132, CHEM 132L	8
Chemistry	B	CHEM 131, CHEM 131L	4
Chemistry	C	ISCI 101, ISCI 104	4
Chinese – Language	A,B	CHIN 231	3
Computer Science	A,B	CS 149, CS 159	6
Divinity	A,B	REL 202	3
English Language	A,B	WRTC 103	3
English (Literature in)	A,B	ENG 221, ENG 222	6
Food Studies	A,B	NUTR 340	3
French – Language	A,B	FR 231	3
German – Language	A,B	GER 231	3
Hindi – Language	A,B	FL 000	3
Marathi – Language	A,B	FL 000	3
Marine Science	A,B,C	ISCI 003	4
Mathematics	A,B	MATH 235, MATH 000	7
Mathematics further	A,B	MATH 000	4
Physical Education	A,B,C	KIN 000	3
Physical Science	A,B	ISCI 101, ISCI 104, ISCI 001	8

Physical Science	C	ISCI 101, ISCI 104	4
Physics	A,B	PHYS 140, PHYS 140L, PHYS 150, PHYS 150L	8
Physics	C,D,E	ISCI 101, ISCI 104	4
Portuguese – Language	A,B	PORT 231	3
Psychology	A,B,C	PSYC 101, PSYC 002	6
Sociology	A,B,C	SOCI 101	3
Spanish – Language	A,B	SPAN 231	3
Tamil – Language	A,B	FL 000	3
Telugu – Language	A,B	FL 000	3
Travel and Tourism	A,B	HM 000	3
Urdu – Language	A,B	FL 000	3
Urdu – Pakistan Language	A,B	FL 000	3

<i>AS-Level Exams</i>			
Cambridge International Exam	Accepted Grades for Credit	JMU Equivalent Course	Credit Hours Earned
Afrikaans – Language	A	FL 000	3
Arabic – Language	A	ARAB 231	3
Biology	A	BIO 103, ISCI 104	4
Chemistry	A	ISCI 101, ISCI 104	4
Chinese – Language	A	CHIN 231	3
English (Literature in)	A,B,C	ENG 222	3
French – Language	A	FR 231	3
German – Language	A	GER 231	3
Hindi – Language	A	FL 000	3
Hinduism	A,B	REL 310	3
Islamic Studies	A,B	HUM 252	3
Japanese – Language	A	JAPN 231	3
Marathi – Language	A	FL 000	3
Marine Science	A,B,C	ISCI 003	4
Mathematics	A,B	MATH 000	3
Physical Science	A	ISCI 101, ISCI 104	4
Physics	A	ISCI 101, ISCI 104	4
Portuguese – Language	A	PORT 231	3
Psychology	A,B,C	PSYC 002	3
Spanish – Language	A	SPAN 231	3
Spanish – First Language	A	SPAN 231	3

Tamil – Language	A	FL 000	3
Telugu – Language	A	FL 000	3
Urdu - Language	A	FL 000	3

United Kingdom "A" Level Examinations

Credit will be awarded to those students who receive a "C" or higher on an "A" level exam. Credit will be comparable to completing the two-course introductory sequence (six credit hours) in the subject.

French Baccalaureate

Students with scores of 12/20 or higher on examinations in subjects studied at a coefficient of 4 or 5 may be awarded general education or other credit. Evaluation of credit will be directed by University Programs in coordination with the appropriate departmental undergraduate office. The "Total Score" of the French Baccalaureate is not used to determine credit eligibility.

German Abitur

Students who participated in the Thirteenth Class (Dreizehnte Klasse) German Abitur program may be awarded general education and other credit for examination scores of 10 or higher (15-point scale). Evaluation of credit will be directed by University Programs in coordination with the appropriate departmental undergraduate office.

International Baccalaureate

JMU recognizes the International Baccalaureate diploma and individual IB courses by awarding credit on IB higher-level examinations in essentially the same manner in which credit is allowed for Advanced Placement courses.

Typically, credit hours will be awarded for each higher-level examination on which a score of five, six or seven has been earned. Credit hour equivalencies are reviewed annually by academic unit.

Some standard-level examinations will also be considered for credit. The university encourages the completion of the IB diploma and will give special consideration for admission to students who have completed the IB program. The grading scale is from one to seven, with seven being the highest score.

For a full listing of available IB courses and credit opportunities, refer to the International Baccalaureate Courses table.

2023-2024 International Baccalaureate Courses

This information is subject to change at the discretion of James Madison University. For the 2023-2024 academic year, the scores displayed in the online catalog supersede the scores in the printed undergraduate catalog.

Once IB credit has been posted to the transcript, it will not be removed unless it was posted in error, or the student subsequently repeats the course at JMU and earns a passing grade (D- or better).

Higher-Level IB Courses

2023-2024 International Baccalaureate Courses			
International Baccalaureate Course	Minimum Required Score	JMU Equivalent	Credit Hours Earned
Anthropology (social and cultural)	5	ANTH 195 & ANTH elective	6
Art/Design	6	ART 102 & ART 292	6
	5	ART 102	3
	4	ART 292	3
Art/Visual	5	ART 102	3
Biology	7	BIO 140, BIO 140L, BIO 150, BIO 150L	8
	6		
	5		
Business Management	6	BUS 160	3
Chemistry	5	Majors: CHEM 131, CHEM 132	6
	5	Nonmajors: CHEM 131, CHEM 131L, CHEM 132, CHEM 132L	8
Computing Studies	5	CS 149	4
Economics	6	ECON 201 & ECON 200	6

English A	5	WRTC 103	3
English A, Language and Literature	5	WRTC 103	3
Foreign Languages (Same course numbers in each language)	7	300 + elective	6
	6	231-232	6
	5	231	3
	4	102	4
Geography	6	GEOG 200	3
	5	GEOG elective	3
History: All Regions	6	HIST elective	6
	5	HIST elective	3
History: Africa	6	HIST 263	3
	5	HIST 263	3
History: Americas	5	HIST 225	4
History: West and South Asia	6	HIST electives	6
	5	HIST elective	3
History: East and Southeast Asia and Australia	6	HIST electives	6
	5	HIST elective	3
Mathematics	5	MATH 235	4
Physics	5	PHYS 140 & PHYS 150	6
Psychology	4	PSYC 101	3

Standard-Level IB Courses

International Baccalaureate Course	Minimum Required Score	JMU Equivalent	Credit Hours Earned
Social Anthropology (social and cultural)	5	ANTH 195	3
Art/Design	7	ART 292	3
	6	ART 292	3
Biology	4	BIO 103 & ISCI 104	4
Chemistry	6	Majors: CHEM 131	3
	6	Nonmajors: CHEM 131 - CHEM 131L	4
Economics	6	ECON 201 with IB diploma	3
Foreign Languages (Same course numbers in each language)	7	232	3
	6	231	3
	5	102	4
Geography	5	GEOG elective	3
Global Politics	5	POSC 200	3
History	5	HIST elective	3

Math Analysis & Approaches	5	MATH 205	3
Math Applications & Interpretations	5	MATH 205	3
Philosophy	5	PHIL 101	3
Physics	6	PHYS 140 & PHYS 150	6
Psychology	6	PSYC 101	3
World Religions	5	REL 101	3

Special Admission Requirements

In addition to regular first year student and transfer admission requirements, prospective and current students who want to major in music, musical theatre or dance must also complete an on-campus audition. Incoming freshmen, transfers and change-of-major students intending to major in architectural design, graphic design, industrial design or the BFA in art studio are required to submit an online portfolio. Visit www.jmu.edu/arts/admissions for information regarding the artistic admissions process for all applicable College of Visual and Performing arts majors.

Art

Phone: (540) 568-6216/6661

Email: art-arthistory@jmu.edu

Website: <http://www.jmu.edu/art>

Information for Prospective Students:

<https://www.jmu.edu/artandarthistory/admissions/undergraduate.shtml>

Art History Majors

Students intending to major in art history are not required to submit a portfolio, but should follow the regular JMU admissions process. To enroll in the museum studies concentration in art history, students must have a 3.3 GPA in the major and a minimum of nine credits in Art History and General Education courses.

Architectural Design, Art Studio, Graphic Design and Industrial Design Majors

All prospective freshmen, transfer and change of major students intending to major in architectural design, graphic design, industrial design or studio art must meet JMU admission requirements as stated in the Undergraduate Catalog. In addition to meeting JMU admissions requirements, all students seeking the B.F.A. degree with majors in architectural design, art studio or graphic design, or the B.S. degree with a major in industrial design are required to submit a portfolio to the school's SlideRoom account (James Madison University College of Visual and Performing Arts - SlideRoom - Login). The submission of a portfolio is optional for students seeking the B.A. or B.S. with a major in art studio. Additionally, all transfer and change of major students, except those seeking the B.A. or B.S. with a major in art studio, will need to upload unofficial transcripts and a statement of intent to the school's SlideRoom account that explains their educational and artistic goals, articulating the reasons for choosing this area of study. The submission of a portfolio is seen as evidence of a student's interest and potential for future success in art.

All students, regardless of degree type, who wish to be considered for a scholarship must submit a portfolio to SlideRoom and attend a SADAH Portfolio Feedback day. SADAH hosts in-person and virtual Portfolio Feedback days. Prospective students may register for the events on the school's portfolio page. All scholarship awards are based on merit and vary in amount.

The School of Art, Design and Art History offers students the opportunity to meet professors who will look over their portfolio and offer critiques prior to the digital submission, through several on-campus and off-campus portfolio feedback days. This portfolio feedback event will provide an opportunity for feedback on actual artwork, as well as an opportunity to meet with faculty from the school. Tours of facilities and program info sessions will take place at on-campus events. All prospective first-year, transfer and change of major students are strongly encouraged to attend a portfolio feedback day prior to submitting their portfolio. For these in-person feedback sessions, it is highly recommended that the student show actual works of art; however, a portfolio that consists of digital or printed images is acceptable. If time-based media examples (video and animation) are included, students will need to bring their own digital device for presentation purposes. Refer to the SADAH website for the dates of the upcoming portfolio feedback days and for additional portfolio requirements.

Students artistically admitted to the School of Art, Design and Art History participate in a secondary review process after completing foundations coursework to be accepted to their prospective major. Students seeking official acceptance into the graphic design major must enroll in GRPH 208 and submit a portfolio representing work completed in GRPH 101; GRPH 200 and GRPH 206. Students not admitted may reapply the following semester.

Students seeking official acceptance into the architectural design major must enroll in ARCD 200 and submit a portfolio representing work completed in ARCD 200 and ARCD 202. Students not admitted may reapply the following year.

Students seeking official acceptance into the advanced industrial design courses must enroll in INDU 208 and submit a portfolio representing work completed in INDU 200, INDU 202, GRPH 101, INDU 220, INDU 380 and independent design related work. Students not admitted may reapply one time.

Music

Phone: (540) 568-3851

Email: music_admit@jmu.edu

Website: <http://www.jmu.edu/music>

Admissions to the Bachelor of Music concentrations in the School of Music requires an audition on a primary instrument and an additional SlideRoom application. Students should plan to audition during the academic year preceding their first semester of enrollment. Auditions for music are given on specific dates between November and February. It is important that students indicate their intention to participate in the audition process by January 15.

Admission to the Bachelor of Arts major requires an additional SlideRoom application and an online interview. Students that are seeking faculty lessons will also need to audition.

Application processes and requirements are listed on the School of Music website.

Nursing

Phone: (540) 568-6314

Website: <http://www.nursing.jmu.edu/>

In addition to the regular first year student and transfer admission requirements, students who intend to major in nursing must submit a B.S.N. Admission Application. Applications, admission criteria and admission deadlines may be found on the School of Nursing website.

Special Expenses

A differential tuition of \$90 per credit hour is added to the standard charge for courses carrying the NSG prefix. This charge applies to all students, both in-state and out-of-state, at the undergraduate and graduate levels, with the exception of students enrolled in the R.N. to B.S.N. program.

Theatre and Dance

Phone: (540) 568-6342

Email: theatredance@jmu.edu

Website: <http://www.jmu.edu/theatredance/>

Admissions to the dance, musical theatre and theatre majors are by audition for performers or portfolio review for design/technical theatre, theatre studies (directing, dramaturgy, theatre scholarship, etc.) or theatre education students.

Theatre and musical theatre auditions/portfolio reviews are held between November and February and by video/virtually for first year and transfer student applicants. Refer to the school website for dates and more information on requirements for admission.

Dance major auditions are held between November and February and by video/virtually for first year and transfer student applicants. Refer to the school website for dates and more information on requirements for admission.

Credit for Military Service

JMU encourages veterans to apply for admission as full-time or part-time students.

Information regarding VA Educational Benefits is available from the veterans' coordinator, Student Success Center, 5th floor.

Veterans and service members may submit their Joint Services Transcript (JST) or Community College of the Air Force (CCAF) transcript for credit review. This credit will be determined based on recommendations in A Guide to the Evaluation of Educational Experiences in the Armed Services. Consult the Office of the Registrar.

If a veteran or service member does not have a JST or CCAF, they may submit their DD-214 for review. Less than one year of active duty service provides three credits of health or kinesiology elective credit. One year or greater provides six credits of health and kinesiology elective credit. Students may not receive credit from both the JST/CCAF and DD-214.

Credit is allowed for courses taken at the Defense Language Institute. The amount of credit varies with the type of courses successfully completed. JMU must receive an official transcript. Credit allowed is based on their recommendation in A Guide to the Evaluation of Educational Experiences in the Armed Services. For those languages not offered at JMU, a maximum of 12 hours is accepted.

Academic Policies and Procedures

Academic Affairs

Phone: (540) 568-6616

Website: <http://www.jmu.edu/academic-affairs>

Mission Statement

We are an inclusive academic community committed to excellence in the pursuit and dissemination of knowledge. We advance intellectual and creative discovery through transformative learning experiences that positively impact our lives and communities.

Vision Statement

To establish ourselves as a national university, we distinctively combine the best qualities of liberal arts, research and professional education. We empower diverse faculty, staff and students to change the world ethically and equitably.

Academic Standing and Continued Enrollment

Continued enrollment at JMU depends upon an undergraduate student's ability to maintain satisfactory academic progress toward attaining a degree. The university measures this ability by the student's cumulative grade point average.

To assist students in maintaining satisfactory progress, JMU has adopted academic standards designed to provide early identification of students who are experiencing academic difficulty and to provide timely intervention through academic support programs.

Academic Good Standing

An undergraduate student who maintains a cumulative grade point average of at least 2.0 is considered to be in academic good standing and is eligible for continued enrollment at JMU.

Academic Notice

A student with a cumulative grade point average of 2.0 or above who earns a semester/term GPA below 2.0 is given an "academic notice." Academic notice alerts a student to the consequences of continued poor academic performance and is communicated to the student and the student's adviser. Academic notice does not appear on the student's permanent academic record and the transcript notation for the semester/term will reflect "Academic Good Standing."

Academic Probation

Academic probation is an indication of serious academic difficulty and applies whenever a student's cumulative grade point average falls below 2.0. A student who is placed on academic probation at the end of a semester/term may enroll for the following semester/term; however, a student on academic probation will be restricted to a course load of no more than 13 credit hours each semester until their cumulative grade point average has improved sufficiently enough to remove them from academic probation. The university might also require students on academic probation to confer regularly with their academic advisers, participate in academic skills development programs and/or utilize specific JMU academic resources.

Academic Suspension Threshold

A student will be placed on academic suspension alert or academic suspension if that student's cumulative grade point average falls below the academic suspension threshold for a student with their total number of hours for standing.

Total Number of Hours for Standing ¹	Cumulative GPA for Academic Suspension Threshold
1-27	less than 1.500
28-44	less than 1.650
45-59	less than 1.750
60-74	less than 1.850
75-89	less than 1.900
90-104	less than 1.994
105-119	less than 1.999
120 or above	less than 2.000

¹ Total Number of Hours for Standing includes all hours attempted at JMU plus:

- Credit hours transferred to JMU.
- Credit hours earned by departmental exam and AP credit.
- Credit hours for courses taken on a credit/no credit basis (whether the final grade was CR or NC). For instance, in the example below a student has attempted 60 credit hours at JMU and received 30 credits for transfer work and two hours of no credit work. The hours attempted plus the no credit and transfer hours place this student in the 92 credit hour category, even though the total number of hours earned is equal to 82. With a cumulative GPA of 1.991, the student is subject to suspension.

JMU Hrs Attempted	Trans Hrs.	CR/NC Earned	JMU Hrs. Earned	Cum. Hrs. Earned	Hrs. for Standing	Quality Points Earned	Cum. GPA
60	30	2	52	82	92	119.5	1.991

Academic Suspension Alert

A student will be placed on academic suspension alert if:

- their cumulative GPA is below the academic suspension threshold at the end of their first semester of enrollment at JMU,
- their cumulative GPA is below the academic suspension threshold at the end of a summer session, but their academic status was better than academic suspension at the end of the immediately preceding spring semester,
- their cumulative GPA is below the academic suspension threshold at the end of a fall semester, and they have no prior academic suspensions.

A student who is placed on academic suspension alert may enroll for the following semester/term; however, a student on academic suspension alert will be restricted to a course load of no more than 13 credit hours each semester until they reach academic good standing. The university might also require students on academic suspension alert to confer regularly with their academic advisers, participate in academic skills development programs and/or utilized specific JMU academic resources.

Academic Suspension

A student will be placed on academic suspension if:

- their current term of enrollment is not better than the first term of enrollment and their cumulative GPA is below the academic suspension threshold the end of a spring semester.
- their cumulative GPA is below the academic suspension threshold at the end of a summer session, and their academic status was academic suspension at the end of the immediately preceding spring semester

As a rule, academic suspension will be invoked at the end of spring semester (and summer session for students who attend summer session); however, in exceptional cases where academic performance is persistently unsatisfactory, or in cases where students fail to meet continued enrollment or conditions, the university may choose to suspend students at the end of fall semester.

The period of academic suspension is a minimum of twelve months following a first suspension, and a minimum of twenty-four months following a second suspension. A student who is academically suspended for a second time is eligible to apply to return to JMU by agreeing to apply for the Transfer Equivalent Option (TEO) upon their approved return to JMU. Re-entry is not guaranteed.

Academic Dismissal

A student who is suspended a third time will be permanently dismissed from the university. No appeal of this dismissal will be considered, nor will a student dismissed for academic deficiency be allowed to exercise the Transfer Equivalent Option (TEO).

Academic Standing If Enrolled in Fewer than Nine Credit Hours During First Term of Enrollment

A student who takes fewer than nine credit hours in their **first** term/semester at JMU will not be reviewed for academic standing that term/semester.

Adding a Course, Changing Sections or Changing Credit Options

Students may add a course and change sections or credit options according to deadlines and instructions published on the Registrar's website. Students should note that adding a course may result in a tuition increase.

Dropping and withdrawing both result in the termination of a student's enrollment in that course.

Dropping a Course

Dropping a course must be completed before the drop deadline. There is no fee for dropping a course, and the dropped course will not appear on the student's transcript. Depending on the student's course load, dropping a course might result in a tuition reduction.

Withdrawing from a Course

A student may terminate enrollment in a course by withdrawing from the course after the drop deadline but before the course adjustment deadline. A student who withdraws from a course will receive a grade of "W" for the course, and this grade will be recorded (and remain) on the student's transcript regardless of the status of the student in the course at the time of the withdrawal. Additionally, tuition charges will apply for a withdrawn course.

In extraordinary situations, a student unable to complete some course requirements after the course adjustment deadline (approximately one week after midterm grades are due for a regular semester) may request that the instructor consider awarding a grade of "WP" (Withdrawal While Passing) or "WF" (Withdrawal While Failing). A student should not assume that a late withdrawal will be provided by the instructor. There is no obligation for the instructor to assign a "WP" or "WF" grade. The instructor determines the form (e.g., verbal, written) and timing of requests for a "WP" or "WF" grade. The student must ensure that the request is made in an appropriate manner and at an appropriate time. In response to such a request, the instructor may choose to record a grade of "WP" or "WF," but is not obligated to do so and may record any grade other than "W." The course instructor may also suggest that the student contact the Office of the Registrar about withdrawing from the university. Withdrawing from a course will not result in a tuition reduction.

Students considering withdrawing from a course should be aware that graduate and professional schools and future employers might hold differing opinions on a student's withdrawal from a course. For this reason, a student should withdraw from a course only after serious consideration.

Course Load

The university considers full-time enrollment in a term to be a minimum of 12 credit hours. In all programs, the normal load per semester is 15 or 16 credit hours. A student with a cumulative grade point average of 3.25 or better may register for as many as 21 credit hours per semester. Any student in academic good standing may take a maximum of 19 credit hours without securing special permission.

Students in academic good standing who wish to exceed these credits per semester limitations at JMU and/or through concurrent enrollment elsewhere, must secure permission from the head of the academic unit in which they are majoring.

A student on academic suspension alert or probation may not take more than 13 credit hours per semester without appropriate approval.

Academic Probation and Course Load

Students on academic probation must get the approval of the office of the dean of their major college if they wish to take more than 13 credit hours per semester. Students should note that an undergraduate course load of at least 13 credit hours a semester is required for a student to live in a residence hall.

Summer Session Course Load

During summer session, undergraduate students are advised to carefully consider their academic course load. Students are reminded that summer course work is intensive because of the condensed instructional time-frame and are encouraged to plan their summer schedules with the demanding workload in mind.

Attendance

A student's participation in the work of a course is clearly a precondition to receiving credit in that course. The university recognizes that the nature of a student's participation in the work of a course cannot be prescribed on a campus-wide basis. For this reason, classroom attendance is not a matter subject to regulation by the university. Policies related to class absences and

attendance are determined by the instructor for each course taught. As the faculty member is most knowledgeable of the course content, and presence is tied so closely to their teaching methods and the discipline, the instructor is best positioned to create the requirements for their individual courses. All faculty are required to develop their own policies for their courses and share those policies with their students in the course syllabus.

Federal Financial Aid regulations require that all students be reported as having initially attended or participated in academic activity by the instructor of record after census date. Students being reported as having not attended nor participated in academic activity may be withdrawn administratively from the class.

Do not assume that your lack of attendance or participation will result in your administrative removal from the class. If you wish to drop or withdraw from a class, you need to do so via the enrollment process and by prescribed deadlines.

Absence Policy

Instructors' policies govern how many excused absences will be allowed and how these excused absences will be handled in their classes. Certain absences are often considered legitimate:

- Scheduled absences (known in advance at the start or within the first two weeks of the semester).
- Religious observance where the nature of the observance prevents student from attending class.
- Scheduled necessary medical procedures.
- Participation in intercollegiate athletic competitions.
- Functions or performance activity related to academics (music, debate, workshop, academic conferences, etc.).

Faculty are strongly encouraged to publish, as part of the course syllabus and/or discuss during the initial class session, how many excused absences will be allowed, any mandatory and/or unrepeatable components of the course, and the expected procedure for requesting and obtaining approval for scheduled absences.

Students are required to notify the faculty by no later than the end of the Drop-Add period and determine with the faculty if mutually acceptable alternative methods exist for completing the missed classroom, lab, clinical/field or other required activities. This allows students to drop the course if it is determined that missed academic activities cannot be rescheduled in a reasonable fashion or that the absences would prevent adequate mastery of the material. Students are to submit verification of scheduled absences to the faculty by no later than the first class period of the second week of the semester. Examples of unexpectedly rescheduled absences (initially scheduled for one time, then changed with limited notice) and unforeseeable unscheduled absences (compelling, verifiable circumstances beyond the student's control) include:

- Activity season extended due to achieving berth in playoffs (verified by athletic director).
- Death in immediate family (verified by funeral director and/or copy of obituary).
- Disaster services or armed services activation for duty (verified by copy of official notification).

- Inclement weather postponement of the event or postponement and rescheduling of the event by external parties, e.g., illness of featured speaker (verified by event coordinator).
- Jury duty or court-ordered appearance (verified by clerk of the court).
- Other unavoidable compelling verifiable absence.
- Student illness or injury (verified by health care provider).

Students are to notify the faculty of each unexpected absence and determine with the faculty if mutually acceptable alternative methods exist for completing or demonstrating mastery of missed learning activities within one week of becoming aware of the projected absence.

If required by the faculty, students are to submit verification of any absence to the faculty prior to the absence if possible and upon return to class if not possible prior to the absence. Faculty may consider the absence as unexcused if the student fails to comply with published notification and verification timeframes or procedures.

Auditing

In order to audit a class, a student must have the permission of the instructor and the academic unit head offering the class. Audited courses will not affect a student's attempted and earned credit hours or grade point average, but tuition will be billed for the course.

Catalog of Record

For General Education and university degree requirements, students are generally subject to the curricular and graduation requirements contained in the undergraduate catalog in effect upon their initial enrollment at JMU. Students who leave the university and return after a minimum two calendar years absence will have their requirements updated to reflect the curricular and graduation requirements contained in the undergraduate catalog in effect for the term in which they return to JMU.

A student who declares or changes a major, minor, preprofessional program or concentration will complete the requirements in effect for the catalog year in which the declaration or change was made. With approval from the academic unit overseeing the academic program, the catalog requirement term can be adjusted forward or backward.

Aging Credit

With the exception of undergraduates enrolled in adult degree programs, students are expected to complete all baccalaureate major and degree requirements within seven years of their original entry date to JMU or previous higher educational institution(s). If required by the academic unit, academic work completed more than seven years prior to the students' anticipated graduation date might be subject to review by the major and minor academic units and the General Education Program for applicability to the undergraduate degree program. Additional standards may apply in programs leading to licensure or certification.

Changes in Requirements

James Madison University is a progressive educational institution, and its offerings and requirements in the undergraduate catalog are under continual examination and revision. Revisions often affect currently enrolled students. Although the university attempts to alert students to these revisions through the academic advising process, individual reports of academic progress and

various campus publications, responsibility for meeting all curricular and other graduation requirements rests with the students, who are encouraged to consult regularly with their program advisers.

Classification

The classification of students depends upon the number of credit hours they have earned.

Classification	Credit Hours
First Year	Fewer than
Sophomores	28-59
Juniors	60-89
Senior	More than

Course Adjustment

A course adjustment is any change to a student's registered course schedule. A course adjustment can include any of the following: changing a credit option, changing a section, adding a course, dropping a course or withdrawing from a course. Deadlines for processing specific course adjustments are stated on the Registrar's website. The end of the course adjustment period (approximately one week after midterm grades are due for a regular semester) is the deadline for withdrawing from a course and changing credit options for a semester course. Each student is responsible for knowing his/her registered course schedule and for making any desired course adjustments prior to the published registration deadlines.

Confidentiality of Educational Records

The Family Educational Rights and Privacy Act of 1974

James Madison University adheres to and annually informs students of the Family Educational Rights and Privacy Act of 1974, as amended. This act, with which the institution intends to fully comply, was designated to protect the privacy of educational records. Under the Family Educational Rights and Privacy Act (FERPA), students have certain rights with respect to their education records. These rights include:

- The right to inspect and review the student's education records within 45 days of the day the university receives a request for access.
- The student should submit to the registrar, dean, head of the academic unit or other appropriate official written requests that identify the record(s) he/she wishes to inspect. The university official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the university official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.
- The right to request the amendment of the student's education records that the student believes are inaccurate or misleading.
- The student may ask the university to amend a record that he/she believes is inaccurate or misleading. The student should write the university official responsible for the record, clearly identify the part of the record he/she wants changed, and specify why it is inaccurate or misleading. If the university decides not to amend the record as requested by the student, the university will notify the student of the

decision and advise the student of his/her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

- The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

One exception, which permits disclosure without consent, is disclosure to school officials with legitimate educational interests. A school official is a person employed by the university in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the university has contracted or outsourced institutional services or functions (such as an attorney, auditor, food service or bookstore provider, or collection agent); a person serving on the Board of Visitors; a volunteer performing services for the institution; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his/her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his/her professional responsibility. Upon request, the university may disclose education records without consent to officials of another school in which a student seeks or intends to enroll.

The following is considered "Directory Information" at James Madison University and may be made available to the general public unless the student notifies the Office of the Registrar in person or in writing within five days after the first day of class registration: Student's name, major and minor fields of study, college of major and year (first year, sophomore, etc.), enrollment status (full-time/part-time) including credit hours, dates of attendance, degree sought and time, degrees conferred, awards and honors conferred, participation in officially recognized activities and sports, weight and height of members of athletic teams, the most recent previous educational agency or institution attended by the student, and fraternity and/or sorority and educational societies.

Enrolled students may "opt in" to three additional data elements of directory information: address, email address and telephone number. By "opting in" to these additional data elements, the student is authorizing JMU to release this information to any third party entities who request any directory information on JMU students. If a student wishes to "opt-in" to these additional three elements, they can log in to MyMadison, Select Student Center, Personal Information, and then Student Privacy.

Students have the right to file a complaint with the U.S. Department of Education concerning alleged failures by James Madison University to comply with the requirements of FERPA.

The name and address of the office that administers FERPA is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, D.C. 20202-4605 or <http://www2.ed.gov/policy/gen/reg/ferpa/index.html>.

More detailed information concerning JMU's records policy is available from the James Madison University Policies Manual Policy 2112, The Family Educational Rights and Privacy Act, at <https://www.jmu.edu/JMUpolicy/>.

Credit Hours

The JMU academic calendar is based on the semester system. The unit of credit is the *credit hour*. Each credit hour represents the combination of in-class and out-of-class work:

1. A minimum of one 50-minute class period of faculty instruction or its equivalent each week over a 15-week semester for all forms of instruction (or equivalent total time for blocks of instruction different than 15-week semesters). For purposes of this definition, instruction consists of regular and substantive interaction or guided interaction, which may include in-person lectures, synchronous or asynchronous online lectures, seminar, discussions, studios, supervised group work, and examinations, OR A minimum of two 50-minute class periods for each week in the semester (or equivalent total time for blocks of instruction different than 15-week semesters) for laboratory, studio or fieldwork,

AND

2. A minimum of two hours of out-of-class student work or academic engagement each week to meet appropriate course objectives (or equivalent total time for blocks of instruction different than 15-week semesters). For purposes of this definition, out-of-class student work consists of time student spends outside of direct faculty instruction to fulfill course objectives, which may include reading assignments, problem assignments, quizzes and examinations, online and face-to-face group work, writing papers(s), and preparation/follow up for labs or field experience.

Credit/No-credit Course Registration

The credit/no-credit option has been established to encourage students to explore academic areas with which they are unfamiliar. Such academic exploration allows students to fully integrate field-based learning activities into appropriate programs of study. The design of the credit/no-credit option allows students to participate in courses outside of their major and minor fields of concentration without jeopardizing their academic records. In some cases, the credit/no-credit option might also help to reduce academic pressures and competition for grades.

Students electing to take courses under this option should be selective in choosing the courses that they take as credit/no-credit. Graduate and professional schools and future employers, however, might hold differing opinions of such a nontraditional grading system. For this reason, students should consult with their academic advisers for information concerning the inclusion of credit/no-credit course grades within their programs.

Students are eligible to take a course on a credit/no-credit basis if they have completed at least 28 credit hours at JMU and have attained a 2.25 cumulative grade point average or higher. Transfer students may take courses on the credit/no-credit option only if they have completed 28 credit hours with at least 14 hours at JMU.

JMU allows students to register for kinesiology activity courses on a credit/no-credit basis at any time without regard to minimum hours completed or grade point average. Also, grades for student teaching are assigned on a credit/no-credit basis. Except for field-based courses (which may be defined by an academic unit as credit/no-credit), the following courses may not be taken as credit/no-credit:

- Courses used to meet General Education requirements
- Courses used to meet declared major requirements
- Courses used to meet declared minor requirements
- Any course listed by subject name in the major or minor program, even if the course does not specifically satisfy a requirement for the major or minor
- Courses being repeated that were previously taken for a letter grade
- Degree requirements

Students should also keep in mind the following factors when considering the credit/no-credit option:

- Students can take up to 15 credit hours on a credit/no-credit basis.
- The university limits the maximum number of credit/no-credit courses a student can take to four credit hours per semester or one course of more than four credit hours per semester.
- Student teaching is not counted as a part of these credit/no-credit totals.
- Students registering for classes should complete the required paperwork with the Office of the Registrar for courses that they plan to take on a credit/no-credit basis, and all changes to and from the credit/no-credit option must be completed by the end of the course adjustment period.
- The credit/no-credit option will only apply to final grades. All course work and quizzes will be graded as if the student were taking the course for graded credit.
- Students taking a course on a credit/no-credit basis will only be identified to the instructor after final grades have been submitted.
- Instructors will submit letter grades on the grade roster and the student administration system will convert all grades of "A" through "C" to "CR" (credit) for those students enrolled under the credit/no-credit option. (The university makes exceptions to this process for field-based courses designated by the academic unit.) Students will receive credit hours, but they will not receive quality points for the work completed. Therefore, the grade of "CR" will not affect a student's cumulative grade point averages.
- A grade of "NC" (no-credit) will be recorded for all grades of "C-" and below, and the student will not receive credit hours or quality points for the grade of "NC." The fact that the student took the course will remain on that student's transcript, but the grade assigned in that class will not affect that student's cumulative grade point average.

Credit Opportunities

The university offers options for students to earn credit toward their degree outside the traditional classroom setting:

- Admission of High School Students as Special Students pursuing dual enrollment credit
- Admission of first year students with Advanced Placement, or other approved test scores that result in course credit
- Independent Study while enrolled as a student

Credit by Examination

College degrees represent growth and maturity in certain fundamental knowledge and skills rather than a mere accumulation of credit hours. In recognition of the fact that some persons may achieve academic competence through nontraditional means, such as private study, technical employment or prior instruction, JMU endorses the concept of credit by examination.

By permitting a student to earn credit by academic unit examination for knowledge already gained, highly motivated or academically advanced persons are able to accelerate their program. It is the student's responsibility to ascertain what preparation and background are necessary for taking advantage of this means of acceleration, before attempting an examination.

Any enrolled undergraduate student may apply to take an examination for credit in selected courses in the undergraduate curriculum. Permission to take an examination for credit must be obtained from the head of the academic unit in which credit is sought. A student will not be permitted to take the examination for credit for a course which satisfies any of the following:

- The student is presently enrolled in the course.
- The student has previously completed the course.
- The course is a prerequisite for a course in which the student is currently enrolled or has completed.
- The course is numbered at a lower level than other courses in which the student is currently enrolled or has previously completed, unless the express approval of the academic unit head is secured.
- The course appears previously on the student's record with a grade assigned due to a violation of the Honor System.

Each academic unit will use its own discretion in developing the form of the examination and in determining the procedure to be followed. Students may earn as many as 30 credit hours through credit by academic unit examination, with no more than 12 credit hours in any one discipline. To receive credit, a student must make a grade of "C" or better on the examination. Each academic unit shall determine what constitutes a "C" for that academic unit. No academic unit shall require a grade higher than a "C" for passing the examination. The examination for a course can be taken only once in a given semester. A nonrefundable fee will be charged to the student's account. Each academic unit will determine its time schedule for giving examinations.

Independent Study

Every academic unit at JMU offers a course designed to give capable students an opportunity to do faculty-supervised independent studies. Such courses often carry more than the normal three credit hours for a semester's work. In addition, these independent study courses allow especially capable students to work at their own, often accelerated pace. Arrangements for independent study should be made with individual faculty members.

Final Examinations

Students are expected to attend final examinations during the times scheduled for those examinations. Extenuating circumstances, however, might prompt faculty members to approve a student's request for an exception to attending the final examination. Students whose requests for exceptions are disapproved by the relevant faculty members have the right to appeal to the relevant academic unit head or academic dean. No appeal will be favorably considered without prior consultation with the faculty member.

Final Examinations Missed Due to Inclement Weather or Emergency

In response to inclement weather and other emergencies, the university may be forced to cancel final exams. When the university closes due to weather or other types of emergencies, faculty will administer regularly scheduled final examinations at an official make-up time designated by the university unless

otherwise announced in the course syllabus. The official make-up time will be designated as part of the closing announcement. Unless otherwise notified, make-up examination locations will be the same as locations for regularly scheduled exams.

If it is determined that exams cannot be given because of inclement weather or other emergency, faculty will assign final grades to students based on the exams, tests and projects completed prior to the regularly scheduled exam dates.

Grade Review Procedure

Maintaining standards of excellence and the integrity of the teaching/learning process are important values to JMU faculty. The university and its faculty members also recognize that grades may sometimes be inappropriately assigned. If such disagreements occur, students have a right to voice their opinion concerning a particular course grade. Evaluation of student work and assignment of grades on the basis of academic criteria are the responsibilities and prerogative exercised by the faculty member. A faculty member has the responsibility to evaluate student performance on a fair and scholarly basis in accordance with university policy.

It is the student's responsibility to maintain all documentation for his/her classes, including copies of assignments and grades earned.

Grade Change Procedure

If a student (graduate, undergraduate or post-baccalaureate) believes that a grade was assigned in error, because of a mistake in calculation or an error in recording a grade, the student should consult the faculty member (or faculty members, in the case of a jointly taught course) before the Friday of the second week of classes in the regular semester following the semester of the contested grade to resolve the discrepancy.

Requests for review of spring semester or summer session grades must be initiated no later than the Monday of the third week of classes in the subsequent fall semester. It is the student's responsibility to maintain all documentation for his/her classes, including copies of assignments and grades earned. If the faculty member agrees that a change should be made, the faculty member should initiate a Grade Change request through the MyMadison Faculty Tab.

The only basis for this type of change is an error in grade assignment or calculation.

If the faculty member does not agree to change a grade based on an error in recording the grade, the student may activate the grade review process listed below.

Grade Review Process

If a student (graduate, undergraduate or post-baccalaureate) believes that a final course grade was unfairly awarded, that student may initiate the grade review process. Students should be aware that, as a result of review, a grade may be raised, lowered or left the same. Evaluation of student work and assignment of grades on the basis of academic criteria are the responsibilities of and prerogative exercised by the faculty member teaching that particular course. Grades should be assigned on a fair and scholarly basis. Grounds for grade review are limited to two categories.

1. The grade was assigned in a manner other than that listed in the course syllabus or as amended by the faculty member with appropriate notice.
2. The grade was assigned in a manner other than that used for other students in the class.

Activating the Grade Review Process

To activate the grade review process, the student should follow these steps.

1. The student submits a Grade Review Form (available from the **Registrar's website**) to the appropriate faculty member by Monday of the third week of classes in the regular semester that follows the semester for which the contested grade was given. The student should attach a written explanation of reasons for the dispute, including any documentation relating to the disputed grade. Requests for review of spring semester or summer session grades must be initiated no later than the Monday of the third week of classes in the subsequent fall semester.
2. The student communicates with the faculty member by Friday of the third week of classes to attempt to resolve the concern.
 - If the student and the faculty member reach an agreement that the grade should be changed, the faculty member changes the grade by initiating a Grade Change request through the MyMadison Faculty Tab.
 - If no resolution is reached, the faculty member signs the Grade Review Form and records a written response on the reverse side of the form. The faculty member returns the original copy of this form to the student, retains a copy of the form for his/her personal records and forwards a copy to the relevant academic unit head by Friday of the fourth week of classes.
3. The student must contact the relevant academic unit head by the Friday of the fifth week of classes to request review of statement and response.
4. The academic unit head then meets with the student and confers with the relevant faculty member.
 - The academic unit head signs the Grade Review Form and records a written response on the reverse side of the form by Friday of the seventh week of classes. The student receives the original copy of this form, the relevant faculty member receives a copy of the form and the sender retains a copy of the form.
 - If all involved parties agree that the grade should be changed, the faculty member initiates a Grade Change request through MyMadison Faculty Tab.

After the review process outlined has been completed, if the academic unit head and faculty member agree that a grade should not be changed, a student can also request that the form, documentation and responses be reviewed by the dean of the college in which the class was taught. The college dean's responsibility is to ascertain whether all parties have had an opportunity to present all relevant facts and have received a fair and impartial hearing at each level, and to review whether the faculty member has acted appropriately in assigning the grade. To enter this phase of the process, a student should follow these procedures.

- The student contacts the dean by Friday of the eighth week of classes and requests that the dean review the overall process.

- The college dean reviews the process to be sure the student and the faculty member have had a fair hearing, and whether the faculty member has acted appropriately in assigning the grade. If the relevant college dean believes that due process was not followed during the review process, or that the faculty member has not acted appropriately in assigning the grade, the dean consults with the relevant faculty member and academic unit head or cluster coordinator in an attempt to resolve the dispute.
- The relevant college dean sends a written response to all involved parties by Friday of the tenth week of classes. This written response is appended to the Grade Review Form. The dean returns the original copy to the student, retains a copy for him/herself and sends a copy to the relevant academic unit head and the relevant faculty member. If it is agreed that the student's grade should be changed, the relevant faculty member initiates a Grade Change request through the MyMadison Faculty Tab.

If the dean determines that the grade will not be changed, there is no further review available to the student. The entire process will not extend past the end of the semester following the contested grade with the exception of grades given for summer session courses.

Special Circumstances

Students who spend a semester abroad should submit the Grade Review Form to the relevant faculty member by the Monday of the third week of classes in the semester following the semester during which the grade was given. These students must also notify the faculty member of their semester absence from campus.

Students can complete a written explanation of the reasons for the dispute and can submit relevant documentation upon their return to campus, but that student cannot submit the request after the end of that semester.

If a faculty member is not on campus when a student wants to initiate a grade review, the student should contact the academic unit head to begin the process. The academic unit head will contact the faculty member for his/her decision on whether the grade should be changed.

Grades for block courses are considered to be officially recorded at the end of the semester; therefore, a grade review process for a block grade should follow the same procedure as for a semester course.

Graduation

Graduation Requirements

The academic unit head, or designee, verifies completion of major and minor course requirements for graduation. The Office of the Registrar verifies total credits earned, the General Education program, degree requirements and the cumulative GPA earned at the university, as well as other university-wide requirements.

To receive a degree from JMU, students must:

- Meet the General Education requirements.
- Have a minimum of 120 earned credit hours accepted by JMU.
- Have a cumulative grade point average of 2.0 or better at JMU.
- Have a cumulative grade point average of 2.0 or better in the major and minor academic plans at JMU.

- Meet the major and degree requirements of one of the curricula leading to the degree for which they are candidates.
- Have been enrolled at JMU a minimum of two semesters.
- Have earned a minimum of 25% of credit hours at JMU (30 credits for degree programs of 120 credits).
- Have earned at least 50% of credit hours accepted by JMU from accredited senior (four-year) institutions of higher education, including JMU (60 credits for degree programs of 120 credits).

A student expecting to graduate at the end of any semester must apply to graduate via MyMadison. Responsibility for meeting graduation requirements rests with the student.

A student who has applied to graduate may participate in commencement exercises only if the student has fulfilled or is reasonably expected to fulfill all applicable graduation requirements prior to the date of the commencement exercises. A student who is reasonably expected to fulfill all applicable graduation requirements no later than the end of summer session may participate in the spring commencement exercises immediately preceding the summer term.

Attendance at commencement exercises is expected.

Permission to participate in (or actual participation in) commencement exercises does not mean or imply that a student has fulfilled all applicable graduation requirements.

Graduation with Honors

Before becoming eligible for graduation with honors, a student must successfully complete the following:

- Enrollment at JMU for a minimum of four semesters (fall and spring).
- Completion of a minimum of 60 attempted and earned credit hours at JMU.
- A minimum cumulative grade point average of 3.50 on all course work completed at James Madison University, including any work completed at JMU as a dual enrollment student prior to undergraduate matriculation and/or any work attempted and earned beyond four semesters or 60 credit hours.

Graduation honors will be determined as specified based on all course work attempted and earned at JMU.

Cumulative Averages Required for Graduation Honors	
Honors	Average
Cum laude	3.50-3.699
Magna cum laude	3.70-3.899
Summa cum laude	3.9 and above

These standards apply only to students entering JMU for the first time in fall 2015 and thereafter. Requirements for graduation with honors for students who entered JMU prior to 2015 are regulated by the catalog in effect at the time they enrolled.

All grades received in all courses attempted at JMU will be used to calculate the grade point average in consideration for graduation with honors.

Graduation honors will be noted in the commencement program. The graduation honors listed in the program will be based on the grade point average at the end of the semester preceding the semester in which final graduation requirements are met. However, for students who participate in the May ceremony but complete requirements in summer session, the honors noted in the commencement program will be based on the grade point average earned at the end of the preceding fall semester. Final graduation honors recorded on the diploma and transcript will be determined by the grade point average at the end of the semester in which all graduation requirements are met.

Graduation Awards

The title of Valedictorian is an honor bestowed by the Faculty Senate on behalf of the JMU faculty. Criteria were established by the Faculty Senate. It is given to the May graduate with the highest grade point average who has also earned at least 100 credit hours at James Madison University as of the fall semester prior to the student's May graduation. The student must have completed an average of at least 14 credit hours per fall and spring semester during his/her career at JMU. The grade point average will be calculated using grades recorded on the official transcript through the fall semester of the student's last year of undergraduate enrollment.

The Academic Excellence Award is an honor bestowed by the JMU Faculty Senate on behalf of the JMU faculty. Criteria were established by the Faculty Senate. It is for the student graduating in August or December who holds a grade point average that equals or exceeds that of the valedictorian and who has earned at least 100 credit hours at James Madison University. The student must have completed an average of at least 14 credit hours per fall and spring semester during his/ her career at JMU. The grade point average will be calculated using grades recorded on the official transcript through the spring semester of the student's last year of undergraduate enrollment. When more than one student qualifies for the Valedictorian or Academic Excellence Awards, each qualified student will be recognized.

Grievance Procedure for Students

This policy applies to student grievances related to the instructional process that do not concern grades, discrimination or harassment. Policies for grievances concerning these matters are outlined elsewhere.

To initiate the grievance procedure, the student should submit to the academic unit head a written statement explaining the reason for the grievance. Supportive documentation should also be included. The academic unit head meets with the student and confers with the relevant faculty member. Following these meetings, the unit head initiates the process as follows.

1. Each academic unit head will appoint an advisory committee made up of faculty and students from the academic unit that will hear grievances of students. The advisory committee may take any of the following actions:
 - Examine materials submitted by the student and the party grieved against ("respondent").
 - Interview the student and the respondent.
 - Interview any witnesses requested by the student, the respondent or the committee.
 - Request additional materials from any person or entity relevant to the charges.

- Make a recommendation on the grievance to the academic unit head.
2. The academic unit head may accept the recommendation of the committee, reject the recommendation, or partially accept and partially reject the recommendation. The academic unit head will take any action he/she deems appropriate on the grievance.
 3. If either the student or the respondent is dissatisfied with the action taken by the academic unit head, the action may be appealed to the dean. The decision of the dean is final.
 4. If the academic unit head is the party against whom the grievance is filed, the dean will receive the report of the committee and stand in the place of the head of the academic unit for the purpose of making the decision on the grievance. If the dean is the party against whom the grievance is filed, the Provost and Senior Vice President for Academic Affairs will handle any appeal.
 5. Following the final disposition of the grievance, a brief written summary of the complaint and outcome is filed with the dean as per University Policy 3110.

Following exhaustion of campus-based procedures, students may direct complaints to the State Council of Higher Education for Virginia. Additional information is available from their website at <http://www.schev.edu/index/students-and-parents/resources/student-complaints>.

Harassment

It is the established policy of JMU to provide a work and study environment for faculty and staff members and students free from all forms of harassment, intimidation and exploitation. Prohibited harassment is offensive verbal or physical conduct. Questions, assistance or violations related to this policy should be directed to the university's Office of Equal Opportunity, 1017 Harrison Street, (540) 568-6991.

As an alternative, the student may deal with harassment in any of the following ways. If a student believes that he/she has been harassed by a staff member, faculty member or a student employee, the student should take one or more of the following actions:

- Discuss the matter with the faculty or staff member involved, explaining why a particular comment or action was offensive.
- Discuss the matter with the immediate supervisor of the faculty or staff member, giving an account of the comment or action in question.

If the student believes that he/she has been harassed by a student, the student should take one or more of the following actions:

- Discuss the matter with the accused, explaining why a particular comment or action was offensive.
- Bring a charge of harassment to the Office of Student Accountability and Restorative Practices.

If a student employee believes that he/she has been a victim of harassment, he/she should take one or more of the following actions:

- Discuss the matter with the accused, explaining why a particular comment or action was offensive.
- Discuss the matter with the immediate supervisor of the accused, giving an account of the comment or action in question.

- Contact the student employment office at (540) 568-3269.

Regardless of who the alleged harasser is, a student may discuss the matter with the Associate Vice President for Student Affairs, the director of the Counseling Center or the Office of Equal Employment, giving full details of the alleged harassment. The student will be advised of proper university procedures that can be pursued. If requested, complaints will be held in confidence and counseling will be provided. No investigation or action against the accused person will be taken on a student's behalf unless the student consents to be identified, if necessary, to the individual accused in connection with the investigation.

A student also has the option of filing a formal charge of harassment with the U.S. Department of Education. Contact information is available from the affirmative action officer at 1017 Harrison Street.

Honor System

The academic program at JMU operates under an Honor System that dates back to the 1909-10 academic session. Students adopted the present Honor System in order to uphold individual and community integrity. Each student is expected to observe complete honesty in all academic matters and to report instances where another student has violated the Honor System.

A student Honor Council administers the Honor System, and every student who matriculates at the university, whether graduate or undergraduate, becomes a member of the Honor System. The university expects the cooperation of faculty members and administrators in upholding this Honor System. The Student Handbook provides full information on the Honor System, and the Honor Council office provides students with assistance in understanding Honor System policy. All incoming JMU students are required to complete an online Honor System Tutorial and test during their first semester.

The Honor Council encourages all members of the JMU community to familiarize themselves with the Honor Code and Honor System procedures.

Inclement Weather or Emergency

When the university is closed due to inclement weather or other emergencies, all classes are cancelled. Policies regarding class cancellations are specified in the syllabus for each course.

Makeup Days for Classes

When it is necessary to cancel classes due to weather or other emergencies, faculty have several options for making up the missed instructional time.

- Hold class at the regularly scheduled time on the official university make-up day, normally the Saturday immediately following the missed class.
- Hold class at a time acceptable to all class members other than the regularly scheduled time or the official make-up day. Time and location will be arranged by the academic unit.
- Accommodate the missed instructional time within remaining class meeting time.
- Hold class through electronic means.

Major Information

Students entering JMU should confer with their advisers in order to determine a major program of study. If entering students have not decided on a specific

major, they may register as exploratory. JMU encourages exploratory students to discuss their interests with representatives from University Advising, professors, academic unit heads and fellow students to find a major program best suited to each student's goals and interests.

Failure to do so could extend the time that students will need to fulfill graduation requirements. Students who would like assistance in identifying career options related to their specific majors can utilize the University Career Center, which helps students decide on career direction by assessing their career interests, skills and abilities as well as providing information about career options.

Declaration of Major

All students must declare their major by the beginning of their sophomore year. To declare a major, students will make their request through the Major Minor Change link on the student center in MyMadison. The request will be forwarded to the academic unit they wish to enter. Academic units accept students on the basis of their academic records and on the satisfactory completion of other criteria the academic units might establish. Academic units assign advisers for students who are beyond the level of a first-year student.

Transfer students who enter JMU with 30 or more credit hours must declare a major upon acceptance to the university.

Change of Major

Students who would like to change their major will make their request through the Major Minor Change link on the student center in MyMadison. The request will be forwarded to the head of the academic unit they wish to enter. Academic units accept students on the basis of their academic records and on the satisfactory completion of other criteria the academic units might establish. Academic units assign advisers for students who are accepted as majors.

Misconduct in Research and Other Scholarly Work

Policy 2205, Misconduct in Research and Scholarship, applies to all individuals involved in the performance of scholarly and creative activity and research conducted at JMU, whether performed under external or internal funding. It applies to all scientists, trainees, technicians and other staff members, students, fellows, guest researchers or collaborators.

Misconduct as defined under this policy means fabrication, falsification, plagiarism or other practices that seriously deviate from those that are commonly accepted within the scientific and academic community for proposing, conducting or reporting research. Misconduct by a student under this policy may result in disciplinary action up to and including expulsion from the university, loss of fellowship or scholarship and potential criminal prosecution.

Non-returning Students and Leave of Absence

Students who plan to leave JMU, either temporarily or permanently, must officially notify the university. To initiate a proper separation from JMU, students should visit the Registrar's website for more information.

Prerequisite and Eligibility Requirements

Students should consult the appropriate catalog to determine prerequisite or eligibility requirements for course selections. Without special permission,

students cannot take for credit a course for which the prerequisite has not been met or for which they are not eligible. In addition, students cannot take for credit a course that is a prerequisite to a course they have already taken. Many courses require other courses as prerequisites. Students should be aware that a course in which they receive a grade below "C" probably does not adequately prepare them to take a course which requires the first as a prerequisite. Before continuing on to a succeeding course, students should discuss their level of preparation with the instructor of the second course and decide whether or not they need to retake the first course to improve their understanding as well as their grade.

Re-entry to the University

Degree-seeking students who have not attended JMU for one or more semesters and who wish to return to their studies at JMU are classified as re-entry students. The re-entry process is contingent upon the student's length of absence and academic standing at the time of departure.

To avoid delays in registration, the Intent to Enroll Form (for students who have been absent from JMU for less than two years) or the Undergraduate Re-entry Form (for students who have been absent for two or more years) must be submitted by the indicated deadline for the anticipated semester of return. The Intent to Enroll form and the Re-entry Form are available online. All registration holds must be cleared before the student will be eligible to register.

Semester	Deadline
Fall Semester.....	July 1
Spring Semester.....	November 1
Summer Session.....	April 1

**Re-entry after Absence of Less Than Two Calendar Years
Students in Good Standing**

Students who left the university in good standing and who have been absent for one semester or more, but less than two calendar years, must submit an Intent to Enroll Form to the Office of the Registrar.

Students on Academic Probation

Students who left the university on academic probation, and who have been absent for one semester or more, must submit an Intent to Enroll Form directly to the Assistant Vice Provost for Academic Student Services, MSC 7506. A personal statement citing the reason for departure and interim activities must accompany the form. Re-entry and continued enrollment are not guaranteed, but are contingent upon review by an academic review committee chaired by the Assistant Vice Provost for Academic Student Services. Such review may result in denial or conditional re-entry.

Students on Academic Suspension

Students who are placed on a first academic suspension may follow the appeal process stated in their suspension notification or apply for reentry after the suspension period. A personal statement citing the reason for departure and interim activities must accompany all Intent to Enroll Forms. Students must submit all documents to the Assistant Vice Provost for Academic Student Services, MSC 7506. Re-entry and continued enrollment are not guaranteed but contingent upon review by an academic review committee chaired by the

Assistant Vice Provost for Academic Student Services. Such review may result in denial or conditional re-entry.

With prior approval from the dean of the major college and the Office of the Registrar, a suspended student may choose to take courses at another institution. Course work completed during the period of suspension may be considered as part of the criteria for re-entry, but courses taken at another institution cannot be used to raise the grade point average at JMU. Students should review the Academic Suspension Threshold chart and consult with their advisers and/or deans to understand fully the impact that transfer credit may have on their JMU academic standing once they return.

Re-entry after Second Suspension or Absence Exceeding Two Calendar Years

Students who are eligible to apply for re-entry after an absence of two or more calendar years, regardless of their academic standing at the time of departure, must apply for readmission through the Office of Academic Student Services. Readmission is not automatic but subject to committee review of the application, the personal statement citing the reason for absence and evaluation of work completed at JMU as well as work completed at other institutions during the student's absence from JMU.

If a degree-seeking student leaves James Madison University after earning a portion of General Education credits and earns an approved Virginia Community College System (VCCS) Associate Degree, JMU will accept it in fulfillment of General Education requirements. Students who earn the approved degree while on academic suspension status from James Madison University are only eligible to re-enter James Madison University by agreeing to apply for the Transfer Equivalent Option upon their approved return to James Madison University.

Registration

Semester course listings are available on the university's internet accessible information system at <https://myjmadison.jmu.edu/>. The university expects all students to register on the dates indicated in the registration calendar.

Credit is not allowed in any course for which the student is not duly registered, and registration is not complete until all fees for the semester have been paid. Students must complete course work during the semester in which they are registered for a course.

Student Assessment

James Madison University requires students to take a series of student outcomes assessments prior to their graduation. These assessments are held at three stages of students' academic careers, including:

- as entering students
- at the mid-undergraduate point when they have earned 45 to 70 credit hours, typically their sophomore year
- as graduating seniors in their academic major(s)

Testing at the first two stages occurs on scheduled Assessment Days in the fall and spring semesters. During these assessments, students are tested on their knowledge in general education areas such as history, science, mathematics and fine arts. In addition, students may also complete tests measuring critical thinking, cultural knowledge, and intellectual and personal development.

Testing of seniors in their major(s) occurs on the spring Assessment Day or is embedded in academic unit courses. The university encourages students to review program requirements for details.

The information gained during assessment makes it possible to compare students who have completed course work in certain areas to those who have not. Transfer students' scores are compared with the scores of students who began their studies at JMU. In addition, assessment in the majors allows programs to determine if the majors are achieving the goals and objectives the academic units have specified. Because these assessments are important to the improvement of JMU's academic and student affairs programs, students are required to participate.

Entering students who miss the scheduled assessments (fall Assessment Day) will receive a hold on their records and will be unable to register for spring courses or make fall course adjustments until such time as the assessments are completed. Students who miss the mid-undergraduate assessments (spring Assessment Day) will receive a hold on their records and will be unable to register for fall courses or make course adjustments until such time as the assessments are completed.

JMU does not report individual student scores; the university does, however, report aggregated test results to measure how programs and services contribute to student learning and development and for student progression based on competency attainment in selected programs. Assessment results are reported within JMU and to external audiences. Internally, group-level assessment results are shared with faculty committees and administrators across the campus to improve university programs. Externally, JMU releases findings on how students perform in general education areas. This information is used to compare the overall performance of JMU students to students from other universities in Virginia. As a result, each student has an impact on these overall scores. The Center for Assessment and Research Studies administers assessment days and works with faculty for assessment of all academic majors and student affairs programs.

Semester Honors Lists

To qualify for the honor of being placed on the President's List, a student must earn a grade point average of 3.900 or above and be considered by the registrar to be carrying a full-time course load of graded credit hours (i.e., exclusive of credit hours taken on a credit/no credit or audit basis).

To qualify for the Dean's list, a student must meet the President's List requirement for course load and earn a grade point average of 3.500- 3.899.

Students Seeking Second Baccalaureate Degrees

Students Currently Enrolled

A currently enrolled student may earn two different baccalaureate degrees through concurrent or consecutive enrollment at James Madison University. To earn a second degree, students must:

- Earn a minimum of 150 credit hours, including a minimum of 60 hours at JMU.
- Meet all degree and university graduation requirements for both degree programs.
- Meet all prerequisite and course requirements in two different majors.

A student who has met graduation requirements for one degree may participate in the commencement activities for that degree and continue with the second degree provided the following occur:

- The student has officially declared the second degree and major prior to the submission of the graduation application for the first degree, and both degrees and majors appear on the student's academic transcript.
- At the time of completion of the first degree, the student must have completed at least 12 credit hours in the major required for the second degree. A student who has earned fewer credits may not continue with the second degree if he/she decides to complete the first degree and participate in commencement exercises.
- No lapse in enrollment (not including summer) occurs between the completion of the first degree and the continued pursuit of the second degree.

Students Not Currently Enrolled

Students who have earned a baccalaureate degree from JMU or from another accredited college or university and want to pursue an additional bachelor's degree or major program have limited options. Students may earn a second baccalaureate degree at JMU in the following programs:

- Adult Degree (Individualized Study, B.A.; Individualized Study, B.I.S.; Individualized Study, B.S.)
- R.N. to B.S.N.

Student Teaching

Student teaching should be a full-time experience. Only in exceptional cases will additional course work be approved during the student teaching period.

Moreover, student teachers cannot expect to work or participate in excessive extracurricular activities during their student teaching period as any interference with student teaching might lower the quality of the individual's performance. Students with problems or special needs must contact the Education Support Center. All student teaching grades are assigned on a credit/no-credit basis.

Transcript

The permanent academic record, or transcript, is the official record of a student's grades earned to date, and it includes the date of graduation, credential received and date of withdrawal or dismissal, if applicable. Conferral information displayed on the transcript will include degree type, major, concentration, minor and certificate names. Posted grades or academic credits of any type will not be removed unless a verified error was made or the student repeats, through JMU enrollment, any posted test or transfer credit and earns a passing grade (D- or better).

The Office of the Registrar may release a student's transcript upon receipt of an approved request from the student or former student.

Transfer Equivalent Option Policy for Readmitted Students

A student who returns to JMU after a separation of twenty-four months and who maintains a minimum 2.0 GPA for 12 credit hours attempted at JMU in consecutive terms (summer may be included but is not required) after his/her return to JMU is eligible to apply for the transfer equivalent policy. This policy

allows a student a quality point status equivalent to that of a transfer student admitted to the university.

The student's new GPA will initially be that attempted in the 12 credit hours taken upon readmission. In order to exercise this option, the student must submit a Transfer Equivalent Option (TEO) Form to the Assistant Vice Provost for Academic Student Services.

The following regulations govern this option:

- The option must be exercised within 30 days of receiving written correspondence from the Assistant Vice Provost for Academic Student Services indicating that TEO requirements have been met.
- A student with outstanding "I" grades is not eligible to apply.
- A student who leaves the university while in good standing is not eligible to apply.
- Credit/no-credit courses do not count toward the 12 attempted credit hours needed for application.
- If a student's TEO requirements are met over multiple consecutive terms/semesters, and/or more than 12 credit hours are attempted while working toward application of TEO, eligibility for TEO will be determined by the average earned on all credit hours attempted after his/her return to JMU.
- All grades will remain a part of the transcript.
- An eligible student will receive degree credit for only those courses for which grades of "C" or better were earned prior to re-entry.
- Quality points earned for any course completed prior to readmission will not count in determining the new cumulative GPA.
- A student whose application for the transfer equivalent policy has been approved may request that credit hours for pre-approved courses taken at another institution be transferred to JMU. The request will be reviewed by the office of the major college dean and the Office of the Registrar.
- The option will be extended only once during a student's enrollment at JMU.

A student interested in this option must apply for re-entry to the university through the Office of Academic Student Services according to established deadlines.

Semester	Deadline
Fall Semester.....	July 1
Spring Semester.....	November 1
Summer Session.....	April 1

Transfer of Credit from Other Institutions

A student wishing to earn credits at another institution, either during the summer or during a regular session, should declare their intent to do so by completing the process outlined on the Office of the Registrar's website. In certain circumstances, official prior approvals may be required via the transfer credit approval form. Transfer requests for courses not listed in the transfer equivalency guide should be accompanied by course descriptions and/or syllabi as part of the process.

The General Education program allows students to transfer credit for a particular course based on a comparison of course objectives and content at JMU with those at the other institution. Once students have enrolled for classes at JMU they are expected to complete the General Education program here. The Associate Vice Provost for University Programs or a cluster coordinator must approve any exception to this policy.

After students have enrolled for classes, some restrictions will be applied to transferring in credit for the General Education program. These restrictions include the following:

- Students will be allowed to transfer in no more than three courses for General Education credit.
 - No more than one transferred course may be applied to any one cluster.
 - Transfer credit will not be awarded for course offerings in Cluster One; Critical Thinking, Cluster Four: The American Experience, or Cluster Five: Wellness due to the content and unique features of these courses.
- Special exceptions to these policies will be reviewed on an individual basis. Such exceptions may include those students who have been discontinued from JMU, or those who wish to participate in study abroad programs or other special circumstances.

The student is responsible for having an official transcript sent to the Office of the Registrar when the work has been completed and final grades have been posted. Credit hours will be awarded for approved courses carrying a grade of "C" or better (2.0 quality points).

Once transfer credit has been posted to the transcript, it will not be removed unless it was posted in error, or the student subsequently repeats the course at JMU and earns a passing grade (D- or better).

Undergraduate Grading System

Maintaining standards of excellence and the integrity of the teaching/learning process are important values to JMU faculty. Evaluation of student work and assignment of grades on the basis of academic criteria are the responsibilities and prerogative exercised by the faculty member. A faculty member has the responsibility to evaluate student performance on a fair and scholarly basis in accordance with university faculty.

The university makes grades available to students through the online student information system (MyMadison) at the end of each semester. Mid-semester grades, if assigned, in all courses are also made available through the online student information system (MyMadison) to new first year students. Grades are not mailed to students.

The academic achievement of a student in a specific course is expressed by letters as in the following table.

Grade	Description
A	Superior
B	Good
C	Average
D	Passing

F	Failure
I	Incomplete
CR	Credit for average or better work
NC	No credit awarded
WP	Withdrawal while passing
WF	Withdrawal while failing
W	Withdrawal

A course in which a grade of "F" is received does not result in earned credit hours, but does count as credit hours attempted in computing the grade point average. A course in which a grade of "NC", "WP", "WF" or "W" is received neither results in earned credit hours nor counts as credit hours attempted in computing the grade point average.

In certain circumstances, a grade of "I" (recorded by faculty and denoting incomplete work in a given course) will be given for a course. An "I" grade not resolved prior to the applicable incomplete grade deadline will automatically be converted to an "F" grade at the end of the next regular semester. Any student receiving an "I" grade should follow the university policy on incomplete grades.

Grade Point Average

The university computes a student's grade point average for any period by dividing the number of quality points earned during that period by the number of credit hours attempted during the same period. For instance, during a period in which a student attempts 16 credit hours and earns 40 quality points, the student's GPA is 2.5.

A student's cumulative GPA is computed by dividing the total number of quality points earned at JMU by the total number of credit hours attempted at JMU.

Incomplete Grades

The "I" grade is used to indicate incomplete work in a given course and is awarded only when a student is unable to complete course work because of illness or another equally compelling reason.

Courses in which a student receives a grade of "I" must be completed by the end of the next regular semester, or the grade is recorded as an "F." Faculty may require a shorter time period in which the student must complete all required work. (See the University Calendar for the dates by which grade changes must be reported to the Office of the Registrar.) A student seeking a grade of "I" must make that request to the relevant faculty member before the end of the semester in which that course is taking place.

Quality Points

Letter grades and quality points express the academic achievement of a student in a specific course. Quality point values are earned for each semester credit hour. The grade of "B" in a three credit hour course earns nine quality points; the grade of "C" in the same course would earn six quality points.

Quality Points Earned	
Grade	Per Credit

A	4.00
A-	3.70
B+	3.30
B	3.00
B-	2.70
C+	2.30
C	2.00
C-	1.70
D+	1.30
D	1.00
D-	0.7
F	0
I (Incomplete)	0
CR (Credit for work which is at the 20 level or above)	0
NC (No credit awarded)	0
WP (Withdrawal while passing)	0
WF (Withdrawal while failing)	0
W (Withdrawal)	0

The following do not affect quality points earned, credit hours attempted or GPA:

- Grades received at other institutions.
- Audited courses.
- "I," "CR," "NC," "W," "WP" or "WF" grades.

Repeating Courses

A student may repeat any of the graded courses that he/she has taken during an undergraduate career at JMU. All grades will be included when calculating the student's grade point average. There are, however, certain exceptions to this rule.

Students may elect to repeat up to two courses during their enrollment as an undergraduate at JMU with a "repeat/forgiveness" option. As a result of the "repeat/forgiveness" option, the university will exclude the previous grade and credit hours earned for the repeated course when it calculates the student's cumulative GPA and earned credit hours total, regardless of whether the previous grade was higher or lower than the repeat attempt.

Both grades will appear on the transcript, and the recalculation of the cumulative GPA will occur after the "repeat/forgiveness" option attempt. The student must either declare the "repeat/forgiveness" option at registration or "edit" the course repeat option via MyMadison prior to the end of the course adjustment period. A student may not exercise the "repeat/forgiveness" option for courses in which that student was assigned a grade as a result of an Honor Code violation. Courses taught on a topic basis are generally repeatable; however, these courses may only be designated with a "repeat credit" option or "repeat/forgiveness" option if both course attempts have the same topic (i.e. a

second attempt of the course HUM 200. Western Classics may only be assigned as a repeat credit or repeat/forgiveness credit if the original attempt of HUM 200 was taken with the topic "Western Classics").

All grades will appear on the student's transcript, but a course that has been repeated will only be counted once toward satisfying graduation requirements. Courses taken at other institutions do not qualify to be taken as "repeat forgiveness." Courses taken under the Credit/No Credit grading basis may not be repeated if credit was awarded for the first attempt. Courses taken in a different JMU career (i.e. Continuing Education) and subsequently transferred to an undergraduate JMU career are not repeatable. Students may request approval to retake these courses utilizing the audit grading basis only.

Withdrawal from the University

Students withdraw from the university when their enrollment is terminated before these students have completed the semester for which they registered. Students who decide to withdraw must complete the Non-Returning/Leave of Absence process found at the Office of the Registrar website.

Academic Terms and Definitions

Degree Requirements

A degree is an academic title conferred on students who complete a unified program of study. Degrees vary according to the major program. JMU offers eight undergraduate degrees that incorporate course requirements unique to the degree and major discipline. Majors culminating in Bachelor of Arts and Bachelor of Science degrees share common sets of course requirements appropriate to the degree with specific distinctions.

Bachelor of Arts degree – The B.A. is distinguished by its humanistic emphasis. Students who complete a B.A. may satisfy the degree requirements by taking courses that advance their understanding of human culture through analysis of ideas; perception of differences; appreciation of art and creative products through understanding art forms, beauty, and symmetry; knowledge of theories and principles of form, substance, argument and philosophy; understanding of the interaction between language and culture; and achievement of linguistic competency in a second language.

Bachelor of Science degree – The B.S. is distinguished by its scientific emphasis. Students who complete a B.S. may satisfy the degree requirements by taking courses that advance their understanding of the use of scientific analysis, experimentation and the application of scientific principles and facts in solving problems; understanding of the crucial role of mathematical reasoning; and understanding analysis and techniques in comprehending problems in the natural or social sciences.

A list of courses that satisfy either Bachelor of Arts or Bachelor of Science degree requirements is available on the Registrar's website.

Program of Study Components

A program of study, or course of study, refers to any set of courses and experiences identified by the university as satisfying the requirements of a program or program component for a student or students. The following terms describe programs of study at James Madison University.

Major – A coherent set of required and elective courses approved by the Board of Visitors and meeting state criteria that, when completed by a student, signifies a degree of preparation in a field or fields of study. The credit hour requirements for the major are set by the respective colleges and academic units and may not consist of fewer than 30 hours. A student must formally declare a major.

Minor – A cohesive set of required and elective courses that, when completed by a student, connotes knowledge and skills in a discipline, region or topic area, but not at the depth of a major. The minor is designed for students who are not majoring in the same area (students may not earn a major and minor in the same discipline) and typically requires between 18-24 credit hours, as set by the respective academic unit and college. A student must formally declare the minor for it to appear on the transcript of record. A minor is not required for graduation except when a student's declared major requires it.

Concentration – A prescribed set of courses associated with a major that is designed to focus a student's course of study according to interest and/or career goals. A concentration is not a required component of all majors. The student must formally declare the concentration for it to appear on the transcript of record.

Cognate – A set of courses outside the major that is designed to complement other components of the student's course of study and to support selected professional goals. A cognate is not a required component of a program, unless specifically incorporated as such by the major. A student does not have to formally declare a cognate and it will not appear on the transcript of record.

Core – A defined group of courses within a particular major or minor that is required of all students completing that major or minor.

Track – A prescribed set of courses within a concentration. A track is not a required component of all concentrations. A student does not have to formally declare a track and it will not appear on the transcript of record.

Pre-professional Program – A defined set of courses or course options and requirements that serve as prerequisites to upper or graduate-level professional program components or courses. A pre-professional program may coincide with a major, minor or concentration, or it may be comprised of courses from two or more disciplines and concentrations.

Pre-professional Advisory Program – This program includes a set of recommended courses for students who wish to shape their undergraduate experience toward a related professional goal beyond the undergraduate degree, such as the pre-law and pre-forensics programs. Pre-professional advisory programs appear on the transcript during a student's undergraduate career, but do not appear on the transcript after graduation.

Pre-professional Licensure and Degree Program – This program must be related to a student's major as part of a planned progress toward professional credentialing, such as the pre-professional teacher education programs. It creates a distinct set of knowledge or skills that qualifies one to practice in a particular area or work in a specific field. This designation appears on the transcript.

Licensure Program – A set or sequence of courses and experiences required for a student to be eligible to obtain a license issued by an agency, group or professional organization.

Certificate Program – A prescribed set or sequence of courses that results in a student receiving a certificate issued by the university when the identified

courses and experiences are completed satisfactorily and when all other conditions have been met in accordance with the definitions and policies governing certificates.

These definitions apply to all programs of study except in cases where program nomenclature specified by the accrediting agency differs from the nomenclature stated by James Madison University.

Military Service

Class Registration for Active Duty Students

James Madison University supports active duty students in the armed forces by providing assistance with class registration when necessary and by request. Active duty students needing assistance should provide a copy of their active duty orders to the Office of the Registrar prior to the first day of class to qualify for assistance under this policy. The Office of the Registrar will serve as an additional resource for the student and the academic unit(s) to assist with the creation of an appropriate class schedule to ensure the service member remains on track to degree completion in a timely manner.

Section 103 Policy

In accordance with Section 103 of the Veterans Benefits and Transition Act of 2018, James Madison University has adopted the following policy for compliance, effective August 1, 2019:

James Madison University will allow an individual to attend and participate in a course of education if the individual provides a Certificate of Eligibility under Chapter 31 or Chapter 33. The individual is permitted to attend the course beginning the date the student provides the Certificate of Eligibility until the earlier date VA provides payment to the school or 90 days after the school certifies tuition and fees. James Madison University will not impose any penalty, including late fees, denial or access to classes, libraries or facilities, or require the student to borrow additional funds due to the inability to meet his or her financial obligations to the institution as a result of delayed payments for education assistance under Chapter 31 or Chapter 33. This policy only pertains to the VA payment of the tuition, comprehensive fee and individual course fees that are paid directly to the university. All other charges on a student's account, including but not limited to out-of-state tuition difference, remaining percentage of in-state tuition if not 100% eligible for Post 9/11, room rent, meal plan, parking fines and/or health center charges are required to be paid upfront by the student by the University Business Office deadline each semester. Late fees and holds may be assessed for these charges.

Section 103 allows the university to require additional actions in order to qualify for this policy. James Madison University requires Chapter 31 and Chapter 33 eligible students to submit their JMU Request for Veterans Educational Benefits form by the first Friday of the semester to the School Certifying Official to avoid a hold or late fee on the account for the VA issued tuition/fee payment. Additional documents – Student Agreement form, Certificate of Eligibility – are also required for first time benefit users at James Madison University.

Veterans Access, Choice and Accountability Act of 2014

James Madison University complies with veteran student regulations regarding tuition rates. The following individuals shall be charged a rate of tuition not to exceed the in-state rate for tuition and fees purposes:

- A Veteran using educational assistance under either chapter 30 (Montgomery GI Bill® – Active Duty Program) or chapter 33 (Post-9/11 GI Bill®), of title 38, United States Code, who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of residence).
- Anyone using transferred Post-9/11 GI Bill® benefits (38 U.S.C. § 3319) who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of residence).
- A spouse or child using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of residence).
- An individual using educational assistance under chapter 31, Veteran Readiness and Employment (VR&E) who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of residence) effective for courses, semesters, or terms beginning after March 1, 2019.
- A spouse or child using Chapter 35 Dependents Educational Assistance (DEA) benefits who lives in the Commonwealth of Virginia while attending a school located in the Commonwealth of Virginia (regardless of his/her formal State of residence).
- Anyone described above while he or she remains continuously enrolled (other than during regular scheduled breaks between courses, semesters, or terms) at the same institution. The person so described must be using educational benefits under either chapter 30, chapter 31, chapter 33, or chapter 35 of title 38, United States Code.

The in-state tuition provisions do not apply to those individuals on active duty using benefits under the Post-9/11 GI Bill® and Montgomery GI Bill®-Active Duty.

To be considered for in-state tuition through the Veteran Access, Choice and Accountability Act of 2014, the student must submit their Chapter 33 Post 9/11, Chapter 30 MGIB Active Duty, or Chapter 35 DEA Certificate of Eligibility or Chapter 31 VRE authorization to the Veteran Benefit's Coordinator in the JMU Office of the Registrar no later than the first day of classes for the semester. If the student claims eligibility but the COE is not available, the Veteran's Coordinator can verify eligibility with Veteran's Affairs. In this case, student's VA benefit application must be approved with VA by the first day of classes.

Please visit the **GI Bill® website** for more information regarding the Choice Act.

Veterans Educational Benefits Grievance Procedure:

The Virginia State Approving Agency (SAA), is the approving authority of education and training programs in Virginia. SAA investigates complaints of GI Bill® beneficiaries. While most complaints should initially follow the school grievance policy, if the situation cannot be resolved at the school, the beneficiary should contact the SAA office via email saa@dvs.virginia.gov.

GI Bill® is a registered trademark of the U.S Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website at <http://www.benefits.va.gov/gibill>.

GI Bill® Advertising Statement:

This institution is approved to offer GI Bill® educational benefits by the Virginia State Approving Agency.

GI Bill® is a registered trademark of the U.S Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website at <http://www.benefits.va.gov/gibill>.

Short Term Military Leave

For Mobilizations and Activations of One Day to Three Weeks

Faculty members are expected to make reasonable academic accommodations or opportunities for students to complete course assignments and/or exams without penalty to the course grade for class absence(s) or missed deadlines due to mandatory military training or obligations. Students will provide faculty members with official military documentation (paper, electronic orders or a unit's memorandum) with as much advance notification as possible for absences that will result from temporal responsibilities of their military obligations. For time-sensitive state or federal emergencies/activations where written documentation may not be available until the end of the obligation, the student is responsible for securing those orders to provide to faculty members upon return to the university. For active duty deployments that exceed three weeks, students should refer to the university policy for "Students Called to Active Duty" on the Registrar's website.

Support for Armed Services Active Duty

Relief, Refund and Reinstatement Tuition Guidelines

James Madison University supports students called to active duty in the armed services by providing for tuition relief and refunds, and for reinstatement of students whose documented service in the uniformed services has required their sudden withdrawal or prolonged absence from their enrollment in the institution. Included is service in the uniformed services whether voluntary or involuntary on active duty in the Armed Forces, including such service by a member of the National Guard or Reserve. When a JMU student is under call or ordered to active duty for a period of more than 30 days, the following provisions will apply.

Tuition Charges and Student Account Balances

If an enrolled student is deployed to active duty military service during the semester, the student can:

- Drop all classes and all tuition charges will be waived with:
 - Personal payments refunded
 - Financial aid adjusted as required
 - Financial aid refunds repaid by student if appropriate
- Maintain all or part of enrollment with:
 - Tuition adjusted accordingly
 - Financial aid adjusted as required
 - Financial aid refunds repaid by student if appropriate

If there are unpaid student account balances at time of deployment, the university will work with individual students on payment arrangements. No collection actions will occur during deployment; however, student must resolve any unpaid balances prior to subsequent enrollment.

Room and Board

If an enrolled student is deployed to active duty military service during the semester, the student's dining and residence hall contract will be adjusted as follows:

- Board fees will be prorated from the dining hall opening date.
- A per diem refund of the room rent will be issued based on the student's official check-out date.

Textbooks

When a student is called to active duty, a full refund for textbooks purchased for the semester in progress is available through the university bookstore by presenting the textbooks and a copy of the applicable military orders.

Deposits

For new students, an enrollment deposit is required to confirm their acceptance of the offer of admission. If a student is deployed to active duty military service before beginning the planned semester of enrollment, the deposit will be refunded.

For returning students, deposits made with the intent of securing facilities or services in a future session will be refunded in full.

Academic Credit

If an enrolled student is deployed to active duty military service during the semester, the student will have three options concerning grades assigned for the semester in which the call to active duty occurs.

- If the student leaves at any time during the semester and elects to receive a full tuition refund, no notation of courses or grades will be recorded on the student's transcript.
- If the student elects to receive an "I" (Incomplete), the regulation regarding conversion of an "I" to "F" grade will be suspended until the student returns to campus. Should the student not return to JMU, the "I" will revert to a "W" (Withdrawal).
- If the student leaves at a point in the semester after which a significant amount of work has been completed, the student may request the assignment of a grade for work completed. This option requires joint agreement of the student and faculty member(s).

Reinstatement: Re-entry to the University (military)

Formerly enrolled undergraduate degree-seeking students who have not attended JMU for one or more semesters and who wish to return to their studies at JMU are classified as re-entry students. The re-entry process is contingent upon the student's length of absence and academic standing at the time of departure. To avoid delays in registration, the Intent to Enroll Form (for undergraduate students who have been absent from JMU for less than two years) or the Office of Admissions Re-entry Form (for students who have been absent for two or more years) must be submitted by the indicated deadline for the anticipated semester of return. All registration holds must be cleared before the student will be eligible to register.

Re-entry after Absence of Less Than Two Calendar Years

Undergraduate Students in Good Standing

Students who left the university in good standing and who have been absent for one semester or more must submit an Intent to Enroll Form located on the [Registrar's website](#).

Undergraduate Students on Academic Probation or Suspension

Students who were on academic probation or suspension when they left the university for active military duty, and who have been absent for one semester or more, must submit an Intent to Enroll Form directly to the Assistant Vice Provost for Academic Student Services. A personal statement describing the student's intended academic and study plans must accompany the form. Re-entry and continued enrollment are not guaranteed, but are contingent upon review by an academic review committee chaired by the Assistant Vice Provost for Academic Student Services. Such review may result in denial or conditional re-entry.

Re-entry after Absence of Two Calendar Years or More

Students who have been absent for two or more calendar years, are eligible for re-entry if (1) they return to the University after a cumulative absence of not more than five years, and (2) they provide notice of intent to return to the University not later than three years after the completion of the period of service. (Exceptions to these time periods may be found in the Higher Education Opportunity Act (HEOA) of 2008.) Students on academic probation or suspension when they left the university may be assigned conditional re-entry. Students must submit the Undergraduate Re-Entry form for readmission via the Office of Academic Student Services as well as proof of military service such as the DD-214.

Students returning after an absence of two calendar years and who do not meet the two conditions above must submit the Undergraduate Re-Entry form for readmission via the Office of Academic Student Services. Readmission is not automatic but subject to committee review of the application, the personal statement and evaluation of work completed at JMU, as well as work completed at other institutions during the student's absence from JMU.

If a degree-seeking student leaves James Madison University after earning a portion of General Education credits and earns an approved Virginia Community College System (VCCS) Associate Degree, JMU will accept it in fulfillment of General Education requirements. Students who earn the approved degree while on academic suspension status from James Madison University are only eligible to re-enter James Madison University by agreeing to apply for the Transfer Equivalent Option upon their approved return to James Madison University.

Reinstatement into Specific Undergraduate Program of Study

When a student with a declared major wishes to return to the same program at the university after an absence of more than two years, the course work taken prior to withdrawal must be reviewed by an adviser/academic unit head prior to the student's re-enrollment. This counseling is required to assure that the previously completed course work is current and applicable to the major. The adviser will assist the student to develop an appropriate academic plan for degree completion.

Students without declared majors wishing to return to study should consult with an adviser in University Advising to receive assistance in developing an academic plan.

Deferral of Enrollment

If an undergraduate student has been admitted to James Madison University and is called to active military duty or enlists in the National Guard before

enrolling, the student may request a deferral of admission using the process below.

The student must submit a letter to the director of admissions requesting a deferment. In the letter the student should provide the reason for the request (call to active duty or National Guard boot camp will not end until after the start of the semester that the student intended to enroll) and indicate the term they wish to enroll (the term can be changed if needed).

The request is reviewed by the director of admissions who sends a letter notifying the student that his/her request has been granted and indicates when JMU expects the student to enroll. The director of admissions will also inform the following offices of the deferment: Registrar's Office; University Business Office; Financial Aid and Scholarships; Orientation Office; Residence Life, Career and Academic Planning; and University Advising (for transfer students).

During the semester prior to scheduled enrollment, JMU will send the student a letter explaining what needs to be done prior to the start of his/her enrollment at JMU.

If the student's discharge from the service is delayed, the student contacts the director of admissions and requests an extension of his/her deferment. The director will approve the delay and inform the following offices: University Business Office; Financial Aid and Scholarships; Orientation Office; Residence Life, Career and Academic Planning; and University Advising (for transfer students).

Documentation

Students should complete Withdrawal or Leave of Absence forms and include a copy of the applicable military orders to qualify for the considerations detailed in this policy.

Types of Credit Awarded

Type of Credit	Applies To	Reviewed By
Credits from other institutions of higher learning	All undergraduate degree seeking students	Office of the Registrar and the academic unit head of the major program of study
Military transcript (i.e. JST, CCAF)	All undergraduate degree seeking students	Office of the Registrar using the ACE guide recommendation on the military transcript
CLEP	Students in the Adult Degree Program	Adult degree program and the academic unit heads
DSST exams	Students in the Adult Degree Program	Adult degree program and the academic unit heads
Excelsior College examination	Students in the RN to BSN program	Nursing department and the Office of the Registrar
Individualized portfolio evaluation	Students in the Adult Degree program	Adult Degree Program
Learning acquired in military service (DD-214)	All undergraduate degree seeking students	Office of the Registrar when student does not have military transcript (JST, CCAF)

For questions pertaining to transfer credit for military education and training, contact the Office of the Registrar at (540) 568-6281 or transfer_credit@jmu.edu.

The Withdrawal Process is appropriate for students who are enrolled in a semester, are deployed to active duty military service and must begin that duty before the current semester has ended. Withdrawal forms are available through the Office of the Dean of Students located in Madison Union Room 300.

A Leave of Absence is appropriate for students who are deployed to active duty military service, but do not need to begin duty during a current semester; for example, if duty will begin during a future semester before classes begin. The Leave of Absence Form is available online from the Registrar's website.

Evaluation of Undergraduate Transfer Credits for Military Students

Credit will be awarded for those courses equivalent to courses offered at JMU in which the student has earned a grade of "C" or better.

The Office of the Registrar and the academic unit head of the program in which the student is majoring will determine the credits required for graduation.

With the exception of some Virginia community college degrees in General Studies, JMU General Education requirements will be waived for those students who have completed either the Associate of Arts, Associate of Science, or the Associate of Arts and Sciences degree at a Virginia community college. For the complete listing of degrees associated with a Virginia Community College that waive all General Education requirements, go to the Transfer Advising website at <http://www.jmu.edu/transfer>. Students who complete one of these associate degrees and are offered admission will receive junior-level status; however, due to varying major and degree requirements, junior-level status does not guarantee graduation in two years. For more details, consult the Office of Admissions or the JMU Virginia Community College Transfer Guide.

Degree Requirements at James Madison University

Bachelor of Arts (B.A.)

Requirements	Credit Hours
Foreign language courses (intermediate level required) ¹	0-14
General Education courses ²	41
Philosophy course (in addition to General Education courses) ³	3
Major concentration courses and electives ⁴	62-76
	120

Bachelor of Business Administration (B.B.A.)

Requirements	Credit Hours
B.B.A. core courses	44-45
General Education courses ²	41
Major courses	24
Electives	11-21
	120

Bachelor of Fine Arts (B.F.A.)

Requirements	Credit Hours
Core program – art courses	24
General Education courses ²	41
Art emphasis courses	54
Electives	1
	120

Bachelor of Individualized Study (B.I.S.)

Requirements	Credit Hours
General Education courses	41
Major concentration courses	30
Electives	49
	120

Bachelor of Music (B.M.)

Requirements	Credit Hours
Core music program courses	27
General Education courses ²	41
Major concentration courses and electives	56-63
	124-131

Bachelor of Science (B.S.)

Requirements	Credit Hours
General Education courses ²	41
Quantitative requirement (in addition to General Education courses) ⁵	3
Scientific Literacy requirement (in addition to General Education courses) ⁵	3-4
Major concentration courses and electives ⁴	73-77
	120

Bachelor of Science in Nursing (B.S.N.)

Requirements	Credit Hours
General Education courses ²	41
Nursing courses	61
Other supportive courses	14
Electives	4-8
	120

Bachelor of Social Work (B.S.W.)

Requirements	Credit Hours
Core program – social work courses	44
General Education courses ²	41
Social work electives	6
Electives	29
	120

¹ The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232), or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures placement test.

² The General Education program contains a set of requirements each student must fulfill. Some credit hours may be fulfilled by requirements within a student's major.

³ Any PHIL course except PHIL 120 or PHIL 150. Consult the list of courses satisfying Bachelor of Arts degree requirements on the Registrar's website.

⁴ Includes education courses leading to licensure in teacher education.

⁵ Consult the list of courses satisfying Bachelor of Science degree requirements on the Registrar's website.

Program List

General Education

American and Global Perspectives (formerly: Cluster Four: Social and Cultural Processes)

Arts and Humanities (formerly Cluster Two: Arts and Humanities)

Madison Foundations (formerly Cluster One: Skills for the 21st Century)

Sociocultural and Wellness Area (formerly Cluster Five: Individuals in the Human Community)

The Natural World (formerly Cluster Three: The Natural World)

Major

Accounting, B.B.A.
Anthropology, B.A.
Anthropology, B.S.
Art History, B.A.
Art, Architectural Design Major, B.F.A.
Art, B.A.
Art, B.F.A.
Art, B.S.
Art, Graphic Design Major, B.F.A.
Art, Industrial Design Major, B.S.
Biology, B.A.
Biology, B.S.
Biology, Forest Biology, Dual Degree
Biotechnology, B.S.
Business Management, B.B.A.
Chemistry, Biophysical Chemistry Major, B.S.
Chemistry, Chemistry Major, B.S.
College of Business, European Business Concentration
Communication Sciences and Disorders major; B.A. degree option
Communication Sciences and Disorders major; B.S. degree option
Communication Studies, B.A.
Communication Studies, B.S.
Computer Information Systems, B.B.A.
Computer Science, B.S.
Dance Major; B.A. degree option
Dietetics, B.S.
Earth Science (See Geology, Earth Science Major)
Economics, B.A.
Economics, B.B.A.
Economics, B.S.
Education: Elementary Education, B.S.
Education: Inclusive Early Childhood Education, B.S.
Education: Middle Grades Education, B.S.
Education: Secondary Education, B.S.
Education: Special Education, B.S.
Education: Teaching English to Speakers of Other Languages, B.S.
Engineering, B.S.
English, B.A.
Finance, B.B.A.
General Psychology, B.A.
General Psychology, B.S.
Geography, B.A.
Geography, B.S.
Geology, B.S.
Geology, Earth Science Major, B.A.
Health Sciences Major; B.S. degree option
Health Services Administration, B.S.
History, B.A.
Hospitality Management, B.S.
Individualized Study B.A. with major in Independent Scholars

Individualized Study B.S. with major in Independent Scholars
Individualized Study, B.A.
Individualized Study, B.I.S.
Individualized Study, B.S.
Information Technology, B.S.
Integrated Science and Technology, B.S.
Intelligence Analysis, B.S.
International Affairs, B.A.
International Business, B.B.A.
Justice Studies, B.A.
Justice Studies, B.S.
Kinesiology, B.S.
Marketing, B.B.A.
Mathematics, B.A.
Mathematics, B.S.
Media Arts and Design major; B.A. degree option
Media Arts and Design major; B.S. degree option
Modern Foreign Languages, B.A.
Music, B.A.
Music, B.M.
Nursing, B.S.N.
Nursing, R.N. to B.S.N.
Philosophy and Religion, B.A.
Physics, B.A.
Physics, B.S.
Political Science, B.A.
Psychology (See General Psychology)
Public Administration, B.S.
Quantitative Finance Major with a Minor in Economics and Mathematics, B.S.
Quantitative Finance/Mathematics Double Major, B.S.
Social Work, B.S.W.
Sociology, B.A.
Sociology, B.S.
Sport and Recreation Management, B.S.
Statistics, B.S.
Theatre, B.A.
Theatre, Musical Theatre Major, B.A.
Writing, Rhetoric and Technical Communication, B.A.
Writing, Rhetoric and Technical Communication, B.S.

Minor

Accounting Minor
Anthropology Minor
Art History Minor
Art Minor
Astronomy Minor
Biology Minor
Business Analytics Minor
Business French Minor
Business German Minor
Business Italian Minor

Business Spanish Minor
 Chemistry Minor
 Christian Studies Minor
 Coaching Education Minor
 Communication Studies Minor
 Computational Analytics Minor
 Computer Information Systems Minor
 Computer Science Minor
 Cultural Communication Minor
 Dance Minor
 Data Analytics Minor
 Economics Minor
 Educational Media Minor
 English Minor
 Ethics Minor
 General Business Minor
 General Music Minor
 Geography Minor
 Geology Minor
 Geophysics Minor
 Global Religion and Global Issues Minor
 Health Communication Minor
 History Minor
 Honors Interdisciplinary Studies Minor
 Human Resource Development Minor
 Integrated Science and Technology Minor
 Jazz Studies Minor
 Mathematics for Middle Grades Teachers Minor
 Mathematics Minor
 Medical Spanish Minor
 Middle Grades Science Minor
 Military Leadership Minor
 Modern Foreign Language Minor
 Music Industry Minor
 Philosophy Minor
 Physics Minor
 Physics Minor for Engineers
 Political Science Minor
 Pre-Athletic Training Minor
 Pre-Dentistry Minor
 Pre-Medicine Minor
 Pre-Occupational Therapy Minor
 Pre-Optometry Minor
 Pre-Pharmacy Minor
 Pre-Physical Therapy Minor
 Pre-Physician Assistant Minor
 Pre-Professional Secondary Education (SEED) Minor
 Pre-Veterinary Medicine Minor
 Public Policy and Administration Minor
 Religion Minor
 Sociology Minor
 Spanish-English Translation and Interpretation Minor
 Statistics Minor
 Teaching English to Speakers of Other Languages Minor
 Theatre Minor

Writing, Rhetoric and Technical Communication Minor

Cross Disciplinary Minor

African, African American and Diaspora Studies Minor
 American Studies Minor
 Asian Studies Minor
 Biochemistry and Molecular Biology Minor
 Book Arts Minor
 British Communication and Media Minor
 Chronic Illness Minor
 Classical Studies Minor
 Climate Science Minor
 Creative Writing Minor
 Criminal Justice Minor
 Disability Studies Minor
 Entrepreneurship Minor
 Environmental Humanities Minor
 Environmental Information Systems Minor
 Environmental Management Minor
 Environmental Science Minor
 Environmental Studies Minor
 Family Studies Minor
 Film Studies Minor
 Global Supply Chain Management Minor
 Historical Archaeology Minor
 Humanitarian Affairs Minor
 Latin American, Latinx and Caribbean Studies Minor
 Latino Community Engagement Minor
 Legal Studies Minor
 Linguistics Minor
 Logic and Reasoning Minor
 Materials Science Minor
 Medical Humanities Minor
 Medieval and Renaissance Studies Minor
 Middle Eastern Communities and Migrations Minor
 Modern European Studies Minor
 Music and Human Services Minor
 Non-Profit Studies Minor
 Political Communication Minor
 Robotics Minor
 Russian Studies Minor
 Science, Technology and Society Minor
 Social Justice Studies Minor
 Social Studies Minor
 Sport Communication Minor
 Substance Use Disorder Education Minor
 Urban and Regional Studies Minor
 Women's, Gender and Sexuality Studies Minor
 World Literature Minor
 Youth Justice Minor

Pre-Professional Teacher Licensure

Art Education Professional PK-12 Licensure
Dance Teaching Licensure
Earth Science Teaching Licensure
English Teaching Licensure
History Teaching Licensure
Media Arts and Design Teaching Licensure
Modern Foreign Languages Teaching Licensure
Teacher Licensure in Theatre

Pre-Professional Program

Pre-Forensic Studies Advisory Program
Pre-Law
Pre-Theological Studies

Studies Abroad

Studies Abroad: Semester in Antwerp
Studies Abroad: Semester in Florence
Studies Abroad: Semester in London
Studies Abroad: Semester in Salamanca

Non-Degree

Air Force Reserve Officers Training Corps
Environmental Programs
Independent Scholars Program
Institute for Innovation in Health and Human Services
Mahatma Gandhi Center for Global Nonviolence
Military Science
Nelson Institute for International and Public Affairs

Student Services and Learning Resources

Administration and Finance Mission Statement

Phone: (540) 568-6434
Website: <http://www.jmu.edu/adminfinance>

The Division of Administration and Finance is committed to the preparation of students to be educated and enlightened citizens who will lead productive and meaningful lives. The division supports the university's commitment to excellence by empowering our staff to communicate effectively with the university community and provide proactive approaches to satisfy customer expectations.

Student Affairs Mission Statement

Phone: (540) 568-3685
Website: <http://www.jmu.edu/studentaffairs>

To engage all students in accessible and inclusive learning, growth, and personal development opportunities and experiences.

Business Services

Bookstore

Location: 211 Bluestone Drive, MSC 2902
Phone: (540) 568-6121
Website: <http://www.jmu.edu/bookstore>

The JMU Bookstore stocks all textbooks: new and used condition, digital and rental formats, required by the academic units, as well as a large selection of general and technical books for faculty and students. The store also sells school supplies, office computer supplies, Apple and Dell computers, software, clothing, gifts, and greeting cards. For students' convenience, the bookstore provides services including special orders for books, textbook buy back, gift cards, and repairs for Apple and Dell computers. The online store can be found at SHOPJMU.com.

Card Services

Location: Student Success Center, MSC 3532
Phone: (540) 568-6446
Website: <http://www.jmu.edu/cardctr>

Card Services issues the JMU access card (JACard), the official identification card for all members of the university community. The JACard allows access to various campus facilities such as residence halls, and many other services. Card Services also has set up a Mobile ID app available on Apple and Android devices that allows access to many of the same services on campus. This app is a supplement to the JACard.

Services include meal plan access, dining dollar and FLEX declining balance accounts, administered by Card Services. FLEX accounts are honored for purchases or services in the bookstore, print services, copy machines, computer labs, library fees, convenience stores, parking, mail services, UREC, UPB movies, University Health Center, Forbes Center and all dining facilities, including on-campus vending machines, as well as many off-campus merchant locations.

Dining Services

Location: D-Hall
Phone: (540) 568-6751
Website: <http://www.jmu.edu/dining>
Email: dining@jmu.edu

We know that dining is an integral part of campus life and see each day as an opportunity to serve delicious food, host great events and provide an overall memorable dining experience. Convinced that nutritious food is essential to a healthy lifestyle and strong academics, we build our menus with health in mind and make eating a well-balanced meal an easy choice.

Meal Plan Basic

Explore our meal plan options, available to residents and commuters. Students living on campus are required to purchase a meal plan, and all plans include Meal Punches and Dining Dollars. Not sure which meal plan to choose?

Consider personal eating habits, class schedule and leisure activities each semester before choosing a meal plan that fits. Meal plan "punches" are not active during university breaks.

Dining at a Glance

MEALS or Meal Punches are included with a meal plan and reload daily or weekly. Use them at our all-you-care-to-eat dining halls, D-Hall and E-Hall, or for a "Duke Deal" meal exchange available at select retail locations. Visit our website for complete details.

DINING DOLLARS can be used at all on-campus locations, including dining halls, retail brands, concessions and vending machines. Any unused Dining Dollars will only roll over from fall to spring, but not year to year. Need to add more funds to your meal plan? No problem, add Dining Dollars GOLD anytime. Cash, JMU Flex and credit/debit card payments are also accepted.

Allergies or Special Dietary Needs At JMU Dining we recognize and accommodate food allergies preferences, and special dietary needs in a way that's personalized, sensitive and supportive. In fact, all employees undergo certified allergy training, and we pride ourselves on working with you to make sure you can make informed food choices. For more information reach out to our registered dietitian at (540) 568-5731.

Parking and Transit Services

Location: Champions Drive Parking Deck, 280 Champions Drive, MSC 1301
Phone: (540) 568-3300
Website: <http://www.jmu.edu/parking>

Parking and Transit Services offers annual, semester and daily parking permits to eligible members of the university community, provides parking arrangements for special events on campus, collaborates with the Harrisonburg Department of Public Transportation to provide safe and reliable bus service, and manages the university's alternative transportation programs including bicycle, carpool, and rideshare options. The department also maintains multi-space pay stations in eight locations across the campus that are intended to provide convenient, short-term metered parking. In addition, permit holders have access to electric vehicle charging stations at six locations for an hourly fee. Parking permits are available to campus visitors, free of charge, upon presentation of a valid driver's license and vehicle registration. Please remember that any vehicle parked on university-owned or leased property must be registered to a valid JMU parking permit, display a temporary pass or pay for metered parking in designated areas.

Print Services

Location: Foundation Hall, MSC 5722
Phone: (540) 568-7300

Location: Engineering/Geosciences (EnGeo; formerly HHS), Room 1002, MSC 4311
Phone: (540) 568-8731

Website: <http://www.jmu.edu/printservices>

Print Services is owned and operated by the university as a service to the campus community and is open to everyone. Two locations provide a full range of photocopying and digital printing services. Services include academic coursepack production, copyright permissions, full color, black/white digital printing, binding and laminating as well as wide format posters/printing and other miscellaneous print-related products. Both locations offer computer labs for working on projects with access to the production machines to complete projects.

Center for Global Engagement

Location: 100 East Grace Street, MSC 5731

Phone: (540) 568-5209

Fax: (540) 568-3310

Website: <http://www.jmu.edu/global>

Study Abroad Programs

Recognizing its responsibility to provide international experiences to JMU students, the university sponsors semesters abroad in Antwerp, Florence, London, Salamanca and Scotland, as well as numerous short-term programs that take place during JMU breaks (winter, spring break, summer). JMU students experience life in a different culture and gain direct access to the historical, artistic and sociopolitical traditions of the environment while pursuing an approved course of study toward their bachelor's degree. The programs are open to all students in good academic standing. Applicants should have a minimum 2.0 grade point average.

Semester in Antwerp

The Semester in Antwerp Program is an experience-based program, blending classroom theory with field trips to actual European businesses and sites of historic and cultural interest. The totality of the experience will result in a deep understanding of European business practices.

While in Belgium, students attend classes onsite at the University of Antwerp with business faculty who specialize in European Integration and the effects of economic and monetary union. For fall and summer, this program is open only to business majors who have been accepted into COB 300. COB 300 is an integrated learning experience consisting of four courses, taken concurrently, which introduces the fundamental conceptual tools of management, finance, operations and marketing in such a way as to establish their mutual relevance and interdependence. The spring semester is open to general business minors only. Admission to the general business minor, or declaration of a major in chemistry, engineering, physics, health services administration, hospitality management, or sport and recreation management is required prior to applying for the program.

No foreign language is needed to participate in this program. This program is offered during the fall, spring and summer.

Semester in Florence

The Semester in Florence program is open to all majors and offers students the opportunity to discover Florence, Tuscany, Italy, and broader Europe. The curriculum promotes engaged, hands-on learning in the city that travelers routinely designate "the best city in the world." Courses focus on Italian gastronomy and oenology, the Renaissance tradition, and contemporary European education, business and politics. In addition to courses in Italian, hospitality management, and art history among others, this program gives

students the opportunity to complete six credits toward the General Education requirement for arts and humanities and is offered during the fall, spring, and summer. Interested students can also earn substantial credit toward a minor in Modern European Studies.

Semester in London

During the Semester in London, students study both classic and modern literature and then examine those great works in context, exploring how history influenced the present in Europe's most cosmopolitan city. Internships are also available as part of the program. With more than 200 possible intern sites in London, positions are widely varied and open to all majors. This unique opportunity allows students to build essential life and career skills while experiencing the British lifestyle first-hand. This program is offered during the fall, spring and summer. Interested students can also earn substantial credit toward a minor in British Communication and Media.

Semester in Salamanca

Offered fall, spring and summer, the Semester in Salamanca program gives students the opportunity to experience the cultural richness of Spain, as their exposure to theaters, concerts, cinemas and other performing arts groups will unveil a new aspect of learning. During fall and summer terms, all courses are taught in Spanish; thus, all applicants must have completed the intermediate level of Spanish (SPAN 232) prior to departure. In addition, during the spring term, students enroll in a 3-credit intensive language class at the level appropriate to their needs during the first two weeks in Salamanca. This requirement permits time for students to adapt to Spanish language and culture before entering regular semester courses.

Fall and Summer semesters offer a language immersion opportunity with courses taught in Spanish. For more information on course offerings, see the Academics page. This program also offers an additional 4-week Internship in Valencia, Spain for Summer participants. Students will have the opportunity to intern in several industries such as business, education, communication, law, engineering, and non-profit. Spring semester is a special term designed for freshmen and sophomores looking to complete general education requirements. Students will select four of the six general education courses offered, plus an elementary or intermediate Spanish course, and UNST 390. All courses are taught in English.

Semester in Scotland

Students spend four weeks in Edinburgh and four weeks in St. Andrews as part of the Semester in Scotland program. This study abroad opportunity is open to all majors and is only offered during the summer. Classes are taught by JMU professors and faculty members from the University of Edinburgh and University of St. Andrews, two of the best and most prestigious universities in the United Kingdom. Participating students take 13 credits in General Education courses. Course offerings vary each summer but will always cover courses in Clusters Two, Three, Four and Five of JMU's General Education curriculum.

Short-Term Programs

Short-term programs are faculty-led and designed to blend coursework with guest lectures, excursions, and unique cultural experiences. Smaller group sizes foster lasting relationships between students and allow for authentic interactions with locals and fellow travelers. Short-term programs vary in length, location, and area of study to allow for seamless integration into even

the most structured academic schedules. With programs in over 50 countries, a short-term program is an excellent way for students to practice a foreign language, make progress toward degree completion, or enroll in general education courses and electives in an immersive format.

Program Cost

The programs' costs differ, but all programs include tuition, housing, course-related travel, instructional events, such as theater, concerts, historical tours and guest lectures, and some social activities. Most programs include a basic food allowance as specified on the website.

All programs exclude the costs of students' travel to and from the program site. Loans and scholarships may be applied, and semester abroad scholarships and assistantships are available. Students enrolled in JMU-sponsored study abroad programs will be covered by a medical insurance policy for the period of time that they are participating in the JMU program.

Interested students can get information about study abroad programs from the Center for Global Engagement.

International Exchange Programs

The university is committed to increasing the opportunities for students' global awareness. Numerous exchange programs with schools and universities abroad are available. JMU's exchange programs are based at prestigious universities around the world, such as Flinders University in Australia; University of Leicester in England; Hiroshima University, Nanzan University and Ritsumeikan University in Japan; Yonsei University in South Korea; the Universidad de Salamanca in Spain; University of Versailles in France; and Malmo University in Sweden. Language requirements and curricula vary.

Exchanges are available to all majors and minors. Students should consult the Center for Global Engagement for application deadlines and further information.

Study at Oxford, Cambridge or St. Andrews

The university also offers the opportunity to study abroad for a semester or a full academic year at three of Great Britain's oldest and most respected universities: the University of Cambridge and the University of Oxford in England and the University of St. Andrews in Scotland. Participants will take part in tutorials across a wide range of topics and live with and share all of the benefits of regular university students. Study at Oxford, Cambridge or St. Andrews is open to all JMU students possessing a 3.3 grade-point average; students do not need to be honors students to participate in this program.

External Abroad Programs

Students may apply to participate in other approved study abroad programs. The university will accept credits earned abroad at approved institutions in accordance with its policy of accepting transfer credits. Approval of proposed study programs must be obtained from the Center for Global Engagement and the head of the academic unit in which the transfer credit will be awarded.

Center for Multicultural Student Services

Location: Madison Union, Room 207, MSC 3504

Phone: (540) 568-6636

Website: <http://www.jmu.edu/multicultural>

The Center for Multicultural Student Services celebrates the diversity of JMU students by fostering student growth and development, heightening awareness and educating its constituents regarding ethnic and cultural diversity.

The purpose of CMSS is:

- To assist the university in its goal of recruiting and retaining a diverse student population through a variety of programs and services designed to assist students in achieving their academic and career aspirations.
- To encourage the development of a climate in which the accomplishments of multicultural students are appreciated.
- To create an environment through which multicultural students can continue to share in and contribute to the mainstream of campus life.

The office works diligently to provide the following services:

- Cultural Programming and Awareness
- Leadership Development
- Recruitment and Retention
- Student Support

Community Service-Learning

Location: Student Success Center, 2nd Floor Room 2200, MSC 1011

Phone: (540) 568-6366

Website: <https://www.jmu.edu/csl>

Community Service-Learning (CS-L) cultivates mutually beneficial partnerships between students, faculty, and community organizations that address community-identified priorities and contribute to student learning. CS-L facilitates intentionally designed short-term immersive and longer-term service experiences that engage students in preparing, reflecting and learning through meaningful service to the community. Students, faculty, staff and community agencies partner to help achieve community-identified goals and prepare students for lifelong engaged citizenship and purposeful community involvement. Students can serve in over 100 community agencies by enrolling in a service-learning course or by contacting the CS-L office.

Students eligible for Federal Work Study can earn their financial aid by tutoring in local elementary schools and by working in local nonprofit organizations to address a variety of community priorities. Check the CS-L website regularly for opportunities to connect.

In addition to local service opportunities, Alternative Break Programs are student developed and led experiences that serve communities in the United States and abroad. Breaks are offered during summer, fall and spring. Breaks fill up quickly, so check the ABP website regularly for descriptions and online sign-up information.

Counseling Center

Location: Student Success Center, Room 3100, MSC 0801

Phone: (540) 568-6552

Website: <http://www.jmu.edu/counselingctr>

The Counseling Center provides free, **confidential** personal counseling services to all JMU students. Initial visits do not require an appointment as the Counseling Center offers walk-in hours for initial assessments Monday-Friday 10am-3pm.

JMU students experiencing a mental health emergency (e.g., thoughts or plans to kill yourself, thoughts of seriously harming others, recent sexual assault) can call or come into the Counseling Center during business hours to speak with a clinician. After regular business hours or on weekends, call the Counseling Center and select "Option 1" to connect to the after-hours crisis line.

Counseling services typically provided at the Counseling Center involve issues such as relationship problems, self-esteem, depression, anxiety/stress, eating and body image concerns, and difficulty adjusting to college life.

Treatment options provided by the Counseling Center include:

- **Specialized Treatment Programs:** There are several specialized treatment programs to assist JMU students with a variety of goals, including: reducing anxiety symptoms, improving mood, increasing coping strategies, regulating emotions, managing distress, fostering healthy relationships and improving self-care. These 3-week programs include numerous evidence-based strategies and interventions. They are one of the quickest ways to reduce symptoms and access clinical services.
- **Group Counseling:** Group counseling is a great way to address a variety of issues within a clinician facilitated small group of participants who meet weekly to discuss their concerns. Groups typically focus on a specific experience, identity, or symptoms (e.g., Self-Compassion, Eating Concerns, Women's Process, True Selves, Grief, Q2Q).
- **Individual Counseling:** Individual counseling provides students with the opportunity to freely explore any personal problems or concerns which have a negative impact on the quality of their life. Due to the high demand for clinical services, individual counseling services at the Counseling center are typically brief, student generally meet with their clinician for approximately 3-5 sessions, depending upon treatment needs and availability. Students who request or require longer term treatment are provided with a referral to a clinician or other services in the local community.
- **Case Management Services:** The Case Managers provide services to students seeking care from the Counseling Center who are assessed as needing additional support due to symptom presentation, lack of resources/means, and elevated risk to themselves or others.
- **Sexual Trauma Empowerment Program (STEP):** The Counseling Center provides a variety of clinical, educational, consultation, and referral services for survivors of sexual trauma.
- **Psychiatric Services:** The Counseling Center Psychiatric staff are trained medical professionals who specialize in prescribing medications that may be helpful to students dealing with mental health concerns. Psychiatric services are only available to students who are currently engaged in ongoing treatment at the Counseling Center. Once students are stabilized on medication, they will be transferred to a community provider in Harrisonburg or back home. Students who are interested in only medication, need a refill, or medication management will be referred to a provider in the community.
- **Consultation:** The Counseling Center staff provide consultation, in person or over the phone, to students, faculty, staff, and others who are concerned about the distressed, unusual, problematic, or potentially harmful behavior of others.
- **Outreach Services:** Educational programming on a wide variety of mental health topics may be requested through the Counseling Center website.

- Workshops: The Counseling Center offers a variety of free workshops on topics such as assertiveness, self-care, and sleep hygiene to JMU students throughout the semester.
- Multicultural Peer Mentor Program: This program is designed to help first year and transfer multicultural and international students make a successful transfer from high school to James Madison University.
- Self-Care Spaces: The Counseling Center offers two unique spaces for self-care, these are available to all JMU students; you do not need to be a client of the Counseling Center to use these spaces. The Oasis is a great relaxation and stress management resource. The Studio is a great space to engage in expressive arts.

Dean of Students

Location: Student Success Center, Room 3010, MSC 3534

Phone: (540) 568-6468

Website: <http://www.jmu.edu/deanofstudents>

Dean of Students supports student learning and interpersonal growth that creates engaged and enlightened citizens and provides support, guidance and advocacy.

The office responds to the informational and personal concerns of students, parents, faculty and staff. Staff in the Dean of Students are committed to helping students and others in the areas of:

- Supporting and advising students and families in crisis and/or challenging situations. The Madison Cares Program is a centralized program for departments, students, parents, and community members to refer or consult about students of concern. We will operate as an extended arm to students experiencing varying levels of social, emotional, academic, or mental-health stressors.
- Partnering and working collaboratively with all community stakeholders to help students achieve both social and academic success.
- Supporting students who are considering withdrawing from the university prior to the end of the semester.
- Notifying faculty of extended absences from class when a student is unable to attend due to extenuating circumstances and will be out more than two days. Such notifications are sent as a convenience for the student, but do not excuse the student's absence. It is the responsibility of the student to contact each professor upon their return regarding the professor's policy for missed classes, assignments, etc.
- Improving students' personal wellness through the Rebound Program to normalize many types of setbacks that students experience in college, including academic, mental health, social and other challenges. We accomplish this through mentorships, small groups, and sharing stories through our video and podcast series.
- Enhancing the educational outcomes of students through the Learning Success Strategies Program. The program consists of dynamic, personalized learning assistance and application of learning strategies based on personal strengths and weaknesses, specific course demands and modified according to academic progress or changing needs.

- Consulting with faculty, staff and students regarding distressed and disruptive students; referrals to appropriate resources.

Office of Disability Services

Location: Student Success Center, Suite 1202

Email: disability-svcs@jmu.edu

Phone: (540) 568-6705

Fax: (540) 568-7099

Website: <http://www.jmu.edu/ods>

ODS collaborates with the JMU community providing programs and support services that promote and advocate for accessibility to create inclusive, equitable environments that value disability, diversity and social justice. Services include:

- Equal access to university programs and services
- Provision and coordination of reasonable accommodations
- Disability-related support services

Disability services is comprised of the following areas:

Accessible Media & Technology

Email: alt-media@jmu.edu

Website: <http://www.jmu.edu/ods/accommodations/accessible-media>

Accessible Media and Technology provides course materials in alternative formats for students with qualifying disabilities, manages the accessible technology labs and supports university faculty and staff with designing accessible course materials. Services include:

- Textbooks and articles in alternative formats such as audio, large print, accessible PDFs and Braille
- Captioning for videos and recorded audio
- Educational programs on creating accessible course materials

Accessible Technology Computer Labs with specialized software and furniture are located in Rose Library (Room 1204) and the Student Success Center (Suite 1202).

Screening & Referral Service

Website: <http://www.jmu.edu/ods/accommodations/screening-and-referral.shtml>

This office provides a two-hour clinical interview exploring a broad range of historical, academic, study habits/skills, academic frustrations and emotional components. A screening does not yield a diagnosis; rather, it assists in the decision-making process for recommending the next steps for the student.

Housing Accommodation Request Committee

Email: specialhousingrequest@jmu.edu

Website: <https://www.jmu.edu/orl/housing/requests.shtml>

The Housing Accommodation Request Committee reviews requests for housing accommodations such as air conditioning and elevator access due to functional limitations stemming from disability or medical condition. Please check the website listed above for deadlines.

Office of Equal Opportunity

Location: 1017 Harrison St., MSC 5802

Phone: (540) 568-6991

Email: oeo@jmu.edu

Website: <http://www.jmu.edu/oeo>

The Office of Equal Opportunity oversees and administers JMU's commitment to providing an equitable and safe environment for the entire JMU community that includes: faculty, staff, students and visitors. JMU adheres to a strict policy that prohibits discrimination of any kind in JMU's hiring practices, admissions, academics or programs involving JMU employees or students. The Office of Equal Opportunity is a resource for all university community members to ensure the protections and rights provided in the non-discrimination policy and other university policies and/or state and federal laws. JMU policy 1302 is the university's nondiscrimination policy and policy 1324 outlines the procedures on how discrimination, harassment and retaliation is adjudicated.

The responsibility for overall coordination, monitoring and information dissemination about JMU's program of equal opportunity, non-discrimination and affirmative action is assigned to the Office of Equal Opportunity. The OEO also monitors JMU's compliance with federal and state laws.

Any university community member who believes they have been subjected to discrimination, harassment or retaliation due to age, color, disability, gender expression, gender identity, genetic information (including family medical history), marital status, military status (including veteran status), national origin (including ethnicity), parental status, political affiliation, pregnancy (including childbirth or related medical conditions), race, religion, sex, sexual orientation, or on any basis protected by law, unless otherwise permitted or required by law may file a complaint with the OEO. OEO office investigates complaints of discrimination, harassment and retaliation and provides preliminary findings. OEO provides consultation to assist individuals as they explore all of their options and resources at JMU.

Honorary Societies

The following honorary and professional societies recognized by the Association of College Honor Societies maintain active chapters on the JMU campus. These honors societies are not administered by the Honors College.

- Beta Gamma Sigma (business)
- Golden Key National Honor Society
- Kappa Delta Pi (education)
- Omicron Delta Epsilon (economics)
- Omicron Delta Kappa (scholarship and leadership)
- Percy H. Warren Chapter of Mortar Board Honor Society
- Phi Alpha Theta (history)
- Phi Beta Kappa
- Phi Kappa Phi National Honor Society
- Phi Sigma Tau (philosophy)
- Psi Chi (psychology)
- Sigma Tau Delta (English)

Other honorary and professional societies at JMU include:

- Alpha Kappa Psi (professional business society)
- American Production and Inventory Control Society (resource management)
- Beta Alpha Psi (accounting)
- Beta Beta Beta (biology)

- Data Processing Management Association (information systems)
- Delta Sigma Pi (professional business society)
- Epsilon Chi Omicron (international business)
- Eta Sigma Delta (hospitality and tourism management)
- Eta Sigma Gamma (honorary)
- Financial Management Association (finance)
- Institute of Management Accountants (accounting)
- Kappa Delta Pi (education)
- Kappa Pi (art)
- National Association of Social Workers Program Unit
- Order of Omega (Greek leadership)
- Phi Alpha National Social Work Honor Society
- Phi Chi Theta (business and economics)
- Phi Epsilon Kappa (physical education honorary)
- Phi Mu Alpha Sinfonia (music)
- Pi Mu Epsilon (mathematics)
- Pi Sigma Epsilon (marketing)
- Rotaract (business)
- SIGGRAPH (digital media production)
- Sigma Alpha Iota (music)
- Society for Collegiate Journalists
- Society of Human Resources Management
- Society of Professional Journalists
- Tau Beta Sigma (band)

The Learning Centers

Location: Student Success Center, Suite 1100

Phone: (540) 568-2932

Website: <http://www.jmu.edu/learning>

JMU's Learning Centers support students, faculty and staff through the following programs and free services:

Communication Center

Location: Student Success Center, Room 1155

Phone: (540) 568-4818

Website: <http://www.jmu.edu/commcenter>

The Communication Center provides resources and assistance with digital and oral communication projects and promotes students' communication excellence through attention to process, innovation and audience-centered design. The center offers consultations, class workshops, and online resources for faculty and students across campus. The center provides the following services:

- Speech preparation assistance
- Assistance with speech outlines and research
- Speech anxiety reduction strategies
- Developing audience-centered presentations and visual aids
- Enhancement of speech delivery and style

Multilingual Student Services

Location: Student Success Center, Room 1155

Phone: (540) 568-2881

Website: <http://www.jmu.edu/ells>

In addition to opportunities to work on academic skills in a cooperative environment, multilingual learners can seek consultation on such topics as:

- Reading, writing, listening and speaking
- American academic culture
- Multilingual writing groups

Peer Assisted Study Sessions

Location: Student Success Center, Room 1141

Phone: (540) 568-4370

Website: <http://www.jmu.edu/pass>

Peer Assisted Study Sessions (PASS) help students successfully complete historically challenging courses. Students work together in regularly scheduled out-of-class study sessions that are facilitated by peer educators. These sessions are designed to help students master course content and develop their organizational, study and learning skills. Refer to the PASS website for a current list of supported courses.

Science & Math Learning Center

Location: Student Success Center, Room 1107

Phone: (540) 568-3379

Website: <http://www.jmu.edu/smlc>

The Science and Math Learning Center (SMLC) provides support to JMU students enrolled in first- and second-year science and mathematics courses by providing a secure, supportive learning environment that fosters independent thinking. The center provides a walk-in tutoring service by both faculty and trained peer tutors in the following subject areas: physics, chemistry, mathematics and statistics. Refer to the SMLC website for a current list of supported courses. The SMLC is equipped with an educational computing lab.

University Writing Center

Location: Student Success Center, Room 1121

Phone: (540) 568-1759

Website: <http://www.jmu.edu/uwc>

The University Writing Center works directly with student and faculty writers, provides resources on writing strategies and supports writing across campus. The center provides the following services:

- Individualized writing consultations
- Writing space for Writing Center users
- Faculty consultations for designing assignments and responding to student writing
- In-class workshops on writing-related issues for any academic course or department
- Supports students working on digital assignments (formerly "DigiComm")

JMU Libraries

Rose Library, Music Library, Educational Technology & Media Center, Carrier Library, JMU Libraries Express

Phone: (540) 568-6150

Website: <http://www.lib.jmu.edu>

At JMU, the libraries are here to support the academic and creative success of all students. We offer comfortable and safe places to learn, explore and collaborate in four locations. We also provide books, journals, musical recordings, videos, and other resources to support research and learning. The Libraries' knowledgeable staff are eager to help students find what they need, whether at a service desk, in an online chat, in a workshop, or by appointment.

Rose Library welcomes over half a million visitors per year, providing five floors of beautifully lit spaces for individual and collaborative study, a café, a makerspace, and a 24-hour study area with a secure entrance and a computer lab. In the makerspace in Rose Library, students can tinker, craft and invent with a wide range of technologies including 3-D printers, virtual reality, sewing machines, and more.

The Music Library is located in the basement of the Music Building, but its specialized resources, computer lab, printers, and study spaces are open to everyone.

The Educational Technology & Media Center primarily serves the College of Education, but its computer lab, makerspace, printers, and study spaces are open to everyone.

Carrier Library is located near the Quad and is currently undergoing a major renovation and expansion. Visit our Carrier Library of the Future page for a preview: www.lib.jmu.edu/renovation/carrier/.

While Carrier Library is closed for construction, we will still offer four library locations. A new service location at **1050 S. Main Street** will be open while Carrier is under construction.

Office of Orientation and Transition

Location: Student Success Center, Suite 2100, MSC 1010

Phone: (540) 568-1787

Website: <http://www.jmu.edu/orientation>

The Office of Orientation and Transition is committed to preparing undergraduate students for the transition to becoming a Duke, no matter if students are experiencing college for the first time or joining us with another institution. It all starts with the virtual *One Book*, followed by attending Orientation and then Weeks of Welcome to kick-off the semester. Lastly, students can join the Dukes First Year Peer Mentor program for extended support throughout their first year on campus. New students will be able to interact with their upper-class peers for support along the way including the Orientation Peer Advisers (OPAs), Orientation Operations Assistants (OOAs), First Year Orientation Guides (FROGs) and Transition Peer Mentors. Our programs and services are designed to introduce new students to all the JMU offers.

Public Safety

Location: Anthony-Seeger Hall, MSC 6810

Phone: (540) 568-6913

Website: <http://www.jmu.edu/police/>

The James Madison University Police Department consists of law enforcement and cadets. The office supports and advances the educational purposes of the

university through the provision of a safe and secure environment for learning, working and personal development.

Police

The university police are commissioned officers with comprehensive law enforcement powers. University police continually patrol JMU's campus and facilities, providing full-service protection to the JMU campus community.

The Campus Police Cadet Program carefully screens and trains students to aid the university police. Cadets are on duty from 7 p.m. until 2 a.m. each weeknight and until 3 a.m. on weekends. Cadets are responsible for patrolling the campus and securing academic and administrative buildings each evening. In addition, they provide escort services to students walking across campus. When cadets are off duty, university police officers escort students as needed.

Office of the Registrar

Location: Student Success Center, Room 5300, MSC 3528
Phone: (540) 568-6281
Website: <http://www.jmu.edu/registrar>

The Office of the Registrar is responsible for:

- Athletic certification
- Class enrollment
- Class schedule preparation
- Academic Advisement Reports
- Diploma issuance
- Enrollment verifications
- Graduation
- Student records
- Transfer credit evaluation
- Transcript issuance
- Veterans Affairs

Office of Residence Life

Location: Huffman Hall, MSC 2401
Phone: (540) 568-4663
Website: <http://www.jmu.edu/orl>

The Office of Residence Life oversees multiple functions related to living and learning at James Madison University. Offices and programs within the department focus on student learning, student development and successful transitions throughout the university experience.

Learning Initiatives focuses on the development of resident students by offering many services and programs specifically targeted toward this group. Community Development oversees the training and supervision of residence hall staff, develops policies and procedures for hall operations, and administers the delivery of programs and services designed to promote student success. Housing Operations manages all university-sponsored housing facilities, including the administration of contracts and room assignments. Housing Operations also oversees Conference Services. Business Operations coordinates all maintenance and housekeeping services and manages residence hall summer projects.

Office	Telephone Number
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Business Operations	(540) 568-7576
Community Development	(540) 568-3501
Director's Office	(540) 568-6275
Learning Initiatives	(540) 568-3598
Housing Operations	(540) 568-4663

Office of Student Accountability and Restorative Practices (OSARP)

Location: Student Success Center, Room 2122
Phone: (540) 568-6218
Website: <http://www.jmu.edu/osarp>
Email: osarp@jmu.edu

We facilitate student development and restoration through a fair process that holds students accountable to community and university standards in order to support student and community success.

Student Government Association

Location: Madison Union, Room 331, JMU Box 8022
Phone: (540) 568-6376
Website: <https://www.jmu.edu/sga/>

The Student Government Association of James Madison University is an organization dedicated to collaborating with all members of its community to advocate for student opinion, while fostering a proactive, inclusive environment.

SGA promotes the welfare of students by providing the medium through which students can actively voice their concerns and by serving as a liaison between the students, faculty and administration at JMU.

Student Handbook

Website: <http://www.jmu.edu/handbook>

The Student Handbook contains all university policies and explains the campus accountability processes, as well as the process used to address allegations of Sexual Misconduct and Title IX Sexual Harassment. It is important to note that processes and policies can change; the information in the online handbook is the most up-to-date version used by OSARP. It is your responsibility to know and follow federal, state and local laws as well as JMU policies.

Student Life

The Student Leadership Center

Location: The Union 330, MSC 3503
Phone: (540) 568-5901
Website: <https://info.jmu.edu/leader/>

The Student Leadership Center helps JMU students become better leaders. The center provides leadership programs like MYMOM, Everyone Can Lead!, Leadership in Action, and Strengths Coaching. Students may check out equipment, books and other resources useful for leadership development, team building and experiential learning leadership activities.

Professional staff in the Student Leadership Center are certified trainers for the DISC Personality Assessment program, the MBTI, *Clifton Strengths*

Coaching and other content. They can provide customized workshops to help people learn more about themselves, how to connect with others and how to build teams more effectively. They also serve as leadership consultants, assisting individuals, groups and organizations in the development of their leadership capabilities.

Fraternity & Sorority Life

Location: The Union 207, MSC 3508

Phone: (540) 568-4195

Website: <https://info.jmu.edu/fsl/>

Fraternity & Sorority Life works with social fraternities and sororities to foster cooperation and communication amongst the chapters, the university and the community. Staff members advise the InterFraternity and Panhellenic Councils. Staff members also work with individual chapters to promote the development of character, leadership, scholarship and service.

Off-Campus Life

Location: The Union 205 H-L, MSC 4214

Phone: (540) 568-6071

Website: <http://www.jmu.edu/ocl>

Off-Campus Life (OCL) is here to assist students in gaining necessary knowledge and skills to make informed decisions within the off-campus community, to provide support and resources to off-campus students allowing them to maintain an academic focus and to inspire and empower students to be responsible citizens who create safe, values-oriented communities. Additionally, OCL operates The Pantry, a free resource for students offering food, hygiene products, limited school supplies, and more. The Pantry is located in Taylor Down Under, Room 112, and is open to all students, no questions asked.

OCL also administers the Utility Deposit Assistance Program (UDAP). UDAP is a JMU sponsored program that allows students to obtain utility connections without paying the up-front deposit costs. JMU becomes your guarantor for payments up to specified limits for water, electric, and gas. This \$40 contract can be purchased through the student tab in MyMadison.

Student Activities and Involvement

Location: The Union 320, MSC 3502

Phone: (540) 568-8157

Website: <https://info.jmu.edu/studentactivities/>

Student Activities and Involvement is home to student organizations, programming and the University Program Board. Student Activities and Involvement provides a wide range of educational, social and wellness events, as well as support services for all JMU student organizations. The Belnvoled website is a platform for all student organizations, students and departments. Student Organization Night at the beginning of each semester offers an opportunity for all students to meet members of student organizations and discover how to become involved with them.

University Program Board

Location: The Union 324, MSC 3505

Phone: (540) 568-8157

Website: <https://info.jmu.edu/upb/>

Many great ways to engage on campus are hosted through the University Program Board (UPB), a student organization advised through Student Activities and Involvement. Concerts, films, speakers, and numerous other activities designed to complement the educational mission of JMU are arranged by the UPB. The board also hosts collaborative programs with other student organizations and JMU departments. Students can join the UPB organization or attend events!

Student Success Center

Location: Student Success Center, Room 1010, MSC 1027

Phone: (540) 568-7747

Website: <http://www.jmu.edu/successcenter>

At JMU, all students can be successful if they rise to the challenges they face as students, take full advantage of the many academic and student support services available to them on the campus, and participate deeply in engagement opportunities on campus and beyond.

Student success succinctly describes JMU's pervasive philosophy of collaborative, campus-wide efforts to coordinate and support services that: help students become more efficient, effective and engaged learners; address students' physical and emotional health; and provide advice and assistance for a variety of financial, curricular, technical and employment concerns.

The James Madison University Student Success Center houses a number of university departments, resources and functions that support student learning, student health and student services.

Title IX Office

Location: 4035 Holland Yates Hall, MSC 780, 6100 E. Grace Street

Phone: (540) 568-5219

Email: titleix@jmu.edu

Website: <https://www.jmu.edu/access-and-enrollment/titleIX/index.shtml>

Notice of Non-Discrimination and Equal Opportunity

James Madison University does not discriminate and prohibits discrimination in its employment, programs, activities, and admissions on the basis of age, color, disability, gender expression, gender identity, genetic information (including family medical history), marital status, military status (including veteran status), national origin (including ethnicity), parental status, political affiliation, pregnancy (including childbirth or related medical conditions), race, religion, sex, sexual orientation, or on any basis protected by law, unless otherwise permitted or required by law. JMU complies with all applicable federal and state laws regarding non-discrimination, affirmative action, and anti-harassment. The responsibility for overall coordination, monitoring and information dissemination about JMU's program of equal opportunity, non-discrimination, and affirmative action is assigned to the Office of Equal Opportunity. Inquiries or complaints may be directed to the Office of Equal Opportunity via OEO website, email oeo@jmu.edu, or phone (540) 568-6991.

JMU prohibits sexual and gender-based harassment including sexual assault and other forms of interpersonal violence. The responsibility for overall coordination, monitoring and information dissemination about JMU's Title IX program is assigned to the Title IX Coordinator. Inquiries or complaints may be directed to the Title IX Coordinator: Amy Sirocky-Meck via Title IX website, email titleix@jmu.edu or phone (540) 568-5219.

University Advising

Location: Student Success Center 4045 MSC 1024

Phone: (540) 568-7350

Website: <http://www.jmu.edu/advising>

University Advising supports students from matriculation to graduation, assisting with their academic planning and contributing to their academic success. The office also develops advising resources for students and faculty and maintains the academic advising website for the university.

First-Year Academic Advising

Academic advising is vital to student success. First-year advisers assist students in shaping their educational experience to meet specific intellectual, personal, and career goals. Advisers do not decide their students' goals or educational program but instead help them learn how to develop appropriate goals, make good choices that enhance learning and personal growth, and succeed in and out of the classroom.

During summer orientation, all new students are assigned to first-year advisers who discuss with them our programs of study, academic policies and procedures, incoming credit, and class enrollment procedures. These advisers continue to work with first-year students until midway through the spring semester, at which time those students with a declared major are assigned to advisers within their academic unit. Students who are still exploring majors are assigned to a professional academic adviser in University Advising. Students must declare their major by the beginning of their sophomore year. Please refer to Academic Policies and Procedures for information on declaring a major.

JMU students are responsible for the educational choices they make; however, they make these choices in a supportive environment. Effective academic advising is a relationship between the student and their adviser. Students must be aware of their own interests, values, and goals; knowledgeable about relevant policies and requirements; and willing to take initiative in seeking assistance when needed. Our academic advisers respond to their students as individuals, are aware of their progress, and help them make connections between academic choices and career possibilities.

Major Academic Advising

University Advising provides full-time academic advising support for major exploration and in select academic programs with large student enrollments to help students make progress in major requirements. Full-time academic advisers are joint appointments between the academic unit and University Advising.

International Study Center Students

The international adviser helps international students make progress from the International Study Center to JMU by assisting them with General Education requirements, selection of a major, graduation requirements, and course registration.

Prospective Transfer Students

Prospective transfer students should choose courses carefully at their current college or university, completing General Education and major coursework that prepares them to make timely progress in their major after transferring to JMU. University Advising maintains online resources to help prospective students

understand transfer equivalencies in each major and administers a co-advising program to provide assistance with academic planning to current community college students. JMU's two Transfer Advising Coordinators hold regular office hours on the campuses of Blue Ridge, Laurel Ridge, Northern Virginia, and Piedmont Virginia Community Colleges, and are available to students at other community colleges or four-year institutions through virtual advising meetings.

New Transfer Students

University Advising coordinates the advising and class registration process for new transfer students matriculating to JMU in the fall and spring semesters. All new transfer students who have earned at least 30 transfer credits must declare a major upon entering the university and are advised by an academic adviser in their major. Advisers support new transfer students in reviewing transfer credit, enrolling in classes, developing academic goals, exploring career opportunities, connecting to campus resources, and understanding academic policies and procedures.

Madison Advising Peers

Madison Advising Peers (MAPs) are JMU students who care about their fellow students and are committed to helping them achieve their college goals. MAPs work in conjunction with faculty advisers by providing supplemental academic advising information and assisting other JMU undergraduate students who may have general advising questions. A MAP can be a supportive and friendly resource for students who feel overwhelmed and confused. Visit the MAPs in SSC 4045 or email madisonadvisingpeers@jmu.edu with questions.

Exploratory Advising

University Advising offers assistance to students who wish to explore changing their program of study. Additionally, our academic advisers help students who are exploring the possibility of adding a second major/minor. Need help? Visit our website to learn more at <https://www.jmu.edu/advising/majors/explore.shtml>.

University Career Center

Location: Student Success Center, 3rd floor, MSC 1016

Advising: Room 3210

Interviewing: Room 3250

Phone: (540) 568-6555

Employer Services

Phone: (540) 568-7379

Website: <https://www.jmu.edu/career/>

University Career Center supports the career readiness of all students through a variety of job search programs, decision-making resources to discern career and academic pathways, and opportunities for students to connect with employers for jobs and internships.

Career Advising and Decision Making

University Career Center helps students understand the process of choosing an appropriate major and relating that decision to possible career paths.

Students can meet with professionals and attend various programs to enhance their knowledge of majors, explore career fields, learn career decision-making strategies, discover more about their own interests and strengths, and launch an effective internship, job or graduate school search.

University Career Center Planning Course

UNST 102 is a course for first year students who want to explore the relationship between academic majors and career fields, identify their major and career interests and learn effective decision-making strategies for choosing a major and a career

Career Resources and Online Tools

The University Career Center website offers several free online tools to help students explore majors and career options, research employers and industries, and develop interview skills. Students can connect directly with internships opportunities, jobs, graduate schools, and programs and services offered by the University Career Center. These online tools include the following: Career Guide to JMU Majors, FOCUS, Vault, Interview Stream, LinkedIn, and Handshake.

Internship and Job Search Services

Connecting with Employers

Companies and organizations representing a wide variety of industries connect with JMU throughout the year to conduct job interviews with graduating seniors and internship interviews for all class levels. Some interviews are held on-campus in our department, and some are conducted online. The University Career Center website provides information about the on-campus interview program and participating employers, as well as the wide range of opportunities available to students. Students are able to create a profile on Handshake, an online platform that connects students to interviews and thousands of positions. Students can also connect with employers and receive feedback on practice interviews through resources hosted by the University Career Center.

Resume Development

UCC offers many resources to assist students with writing resumes. Students can access resume writing resources via the UCC website and participate in resume writing workshops and other programs throughout the year. Students can also meet with career advisers for individual assistance with their resume.

Career Fairs

Several career fair events are sponsored each year by UCC to provide students with the opportunity to interact with employers and obtain job, internship, and employment-related information.

Job Search

Job search related workshops and programs are offered throughout the academic year covering topics such as targeted job search strategies, interviewing, networking and use of social media in the search process. Students may also meet individually with a career adviser to tailor their job search. To prepare for interviews, students can use Interview Stream, a web-based interviewing practice application that is available at any time. Interview Stream allows students to record a practice interview related to their career choice, review the videos themselves and share it with others for feedback. Job postings for all majors can be found on Handshake, our online platform for job and internship postings. Students can use the Vault online industry videos and guides to research specific career fields, obtain job search tips and find additional job listings.

Internships

Handshake and the University Career Center website offer resources on how to find and apply for internships that span a broad range of career fields. Students can also attend a workshop or meet with a career adviser to tailor their internship search. Students are encouraged to speak with their respective academic departments for additional information on internships. If academic credit is desired, arrangements must be made in advance with the student's academic department.

University Health Center

Location: Student Success Center, MSC 7901

Phone: (540) 568-6178

Fax: (540) 568-6176

Website: <http://www.jmu.edu/healthcenter>

The University Health Center is staffed by a team of board-certified medical providers who administer care in a confidential and professional manner.

New students at JMU are required by state law to submit specific information about immunizations. JMU does NOT require a physical exam, but you must comply with the immunization requirement and TB screening prior to attending classes. Therefore, it is mandatory that you complete the following Pre-Entry Health Requirements:

1. Print the JMU immunization form (<https://www.jmu.edu/healthcenter/forms/immunization-form.pdf>) and have it completed and signed by a health care professional. If a different immunization form is used by your health care provider or you have a completed one from high school or another college or university, it will be accepted in lieu of the JMU form.
2. Log in to your MyJMUChart account (<https://www.jmu.edu/healthcenter/medicalservices/my-jmu-health.shtml>) to upload a copy of the completed and signed immunization form, as well as a copy of your health insurance card (front and back). The preferred format for uploaded forms is .pdf. Please do not submit jpeg files.
3. While in your MyJMUChart account, complete the required TB Assessment and Health History under the "forms" tab.
4. Continue checking your JMU email and secure messages on MyJMUChart for confirmation that your record is complete and there is nothing further needed. This step is not complete until you receive that confirmation.

These steps only have to be completed once, not every year.

The University Health Center offers office visits at no cost and low-priced specialty services, such as lab work, to students.

In addition, the health center offers:

- Allergy Injections
- General Medicine Clinic
- International travel consultations
- Lab services
- Patient care coordinator
- Pharmacy
- Nutrition services
- X-ray services

- Urgent Care Clinic for certain medical conditions that require prompt attention
- GYN Clinic

University Recreation

Location: University Recreation Center, MSC 3901

Phone: (540) 568-8732

Website: <http://www.jmu.edu/recreation>

The University Recreation (UREC) team is here to motivate and support students to live well-balanced and active lives. JMU is a very active campus where 92% of students visit UREC at least twice a month and 99% of students indicate that they are satisfied or very satisfied with UREC facilities. UREC is located centrally on campus and JMU's outdoor recreation facility, University Park (UPARK), is located adjacent to the JMU Arboretum. Students only need their JACard to enter these facilities, as membership is included with student fees.

UREC is a vast recreation center with gyms, courts, tracks, aquatic areas and fitness spaces, as well as an equipment center that provides sporting equipment and locker and towel services. UREC also features climbing and bouldering walls, a demonstration kitchen, a café, massage therapy rooms, a meditation studio, personal training, fitness assessment, nutrition counseling, small group training, bike repair and athletic training. UPARK has an open event lawn, tennis, sand volleyball and basketball courts, a sports turf, pavilion, disc golf course, and TEAM Challenge Course.

By the time JMU students graduate, 95% report having participated in at least one UREC program or service. Programs range from adventure, aquatics, fitness, group exercise, informal recreation, intramural sports and sports clubs, to nutrition, safety, wellness and youth programs. UREC also offers a variety of health promotion, prevention, and outreach activities throughout the school year, such as workshops, coaching, trainings, films and other events that teach and empower JMU students to make healthy lifestyle choices.

Online registration is available at URECregister.jmu.edu and programs with fees can also be registered for in-person at UREC using FLEX.

University Unions

Location: The Union 200, MSC 3501

Phone: (540) 568-3341

Website: <http://www.jmu.edu/universityunions>

The University Unions Department reflects a broad range of facilities and services created to build a sense of community for the campus as a whole. The facilities are the gathering places for the campus, with meeting rooms, assembly spaces, lounges and support services available. They are places where ideas come to life, learning is put into practice and the various constituencies of the campus find common ground.

University Unions is comprised of the following units:

Facilities Services

The Union, MSC 3506

Phone: (540) 568-5555

Student Success Center, MSC 1027

Phone: (540) 568-7747

Festival Conference and Student Center, MSC 4201

Phone: (540) 568-1715

Four buildings house the programs and services which the University Unions provide for the JMU community. They are the Union, Student Success Center, Festival Conference & Student Center, and Grafton-Stovall Theatre. Facilities Services address physical building, operations and information concerns in these spaces.

The Union Scheduling

Location: The Union 245, MSC 3506

Phone: (540) 568-6330

Website: <http://www.jmu.edu/theunion>

The Union and Grafton-Stovall Theatre provide gathering places for the campus, with meeting rooms, assembly spaces, lounges and support services available. It provides a comprehensive approach to the coordination of services necessary for campus events and coordination of scheduled meetings and conferences throughout the year.

Festival Conference and Student Center Scheduling

Location: Festival, MSC 4201

Phone: (540) 568-8932

Website: <http://www.jmu.edu/festival>

Festival Conference and Student Center provides gathering places for the campus, with meeting rooms, assembly spaces, lounges and support services available. It provides a comprehensive approach to the coordination of services necessary for campus events and coordination of scheduled meetings and conferences throughout the year.

Taylor Down Under

Location: The Union, 1st Floor

Phone: (540) 568-7853 or (540) 568-5555

Located on the ground floor of Madison Union, this huge space is comprised of a lounge, billiard tables, foosball, iPads for loan, board games, Merge Coffee Bar and Auntie Anne's Pretzel Shop with Carvel ice cream. The TDU lounge area is a popular hangout for all students. There is a computer lab for student use, wireless printing, evening entertainment on the TDU Stage, comfortable seating and an information desk.

Victim Advocacy Services

Location: Student Success Center, Suite 3200, MSC 0801

Phone: (540) 568-6251

Website: <http://www.jmu.edu/victimadvocacy>

JMU Victim Advocacy services act as a safe, **confidential**, welcoming and inclusive resource for JMU students who have experienced sexual violence, relationship abuse or stalking, whether recently or in the past. We also serve family, friends and other support persons to student survivors. We welcome all who may have questions, who need support and guidance, and who are seeking resources and connection. Whatever you decide is right for you, Victim Advocates are here to help.

To connect with an advocate, visit, call, or email us.

Advocates are responsive to email and phone during our regular business hours, Monday-Friday, 8am–4:30pm. Our advocates respond as soon as possible during these business hours and no later than one business day from the time you initiate contact.

Victim Advocacy services are free, trauma-informed and guided by and individualized to your needs. Our advocates collaborate with multiple offices across campus and in the community and can explain the role of a variety of options for support. Commonly, advocacy conversations may include information about or accompaniment to:

- Time-sensitive health and safety resources

- Criminal reporting options
- Campus reporting options
- Protective orders
- Medical care
- Counseling services
- Academic, housing and other accommodations through Title IX
- Other resources specific to your needs

You are welcome to bring a friend or support person along for your visit.

Victim Advocates are also available to meet with students or faculty who are seeking help supporting a survivor.

Tuition and Fees

Student Success Center, Room 5100

Email: ubo@jmu.edu

Phone: (540) 568-6505

Website: <http://www.jmu.edu/ubo>

Tuition and fee charges are available online at <http://www.jmu.edu/ubo>. The tuition and fees listed contribute to general maintenance and operation, instruction, and other university service costs, including recreational and health-service facility costs. The fees also support student activities such as the Student Government Association, University Program Board and student publications.

The amounts listed for tuition do not include certain additional tuition for some academic programs, academic fees, course fees or the cost of books or supplies. The university reserves the right to adjust tuition and fee charges because of rising costs or other conditions upon approval of the JMU Board of Visitors.

The university reserves the right to provide some or all instruction and related academic activities through alternative methods of delivery, including remote delivery. It also reserves the right to change the method of delivery before or during an academic term in the event of a health or safety emergency or other circumstance when it determines that such change is necessary or in the best interests of the campus community. Tuition and mandatory fees will not be reduced or refunded if the university changes the delivery method for any or all of an academic session.

For a full description of the tuition and fee rates, refer to the University Business Office website.

Billing and Registration

Registration for returning students is conducted in March for the summer semester, April for the fall semester and November for the spring semester. Students and their Authorized Users will be notified by email when their initial electronic billing statement is available in Madison Money Manager (M3). Initial summer semester statements will post in April and May. Initial fall semester statements will post in mid-July and spring semester statements will post in early December. Thereafter, all new charges, payments and adjustments will be posted electronically in the real-time section – "Activity Details" – of M3.

After the initial statement, students and Authorized Users will only be emailed when students have a balance on their account.

Students are encouraged to review their financial account for amounts due after any registration or course adjustment activity or meal plan addition or change. Students may access their financial account by using the student information system MyMadison or through the link provided in the billing email. Students are strongly encouraged to set their parents up as "Authorized Users" in the M3 system to assure the timely payment of their student account and to avoid unnecessary delays in communicating information. Student account balances are due in full by the billing statement due date.

To keep university costs as low as possible, the Commonwealth of Virginia has instituted the following financial policies:

- There is a \$50 fee for each check returned due to non-sufficient funds or stop-payment.
- There is a late fee applied to all delinquent accounts. If a student has a balance due that is not covered by financial aid, or the installment payment plan by the payment due date, a late payment fee will be applied to the account which cannot be waived. Financial aid must be accepted and the installment plan must be set up by the due date to avoid the late payment fee. The late payment fee is 3% of the balance due and is non-negotiable.
- Student account balances are due in full by the semester due date to avoid a late fee and/or hold.

Payment of Tuition and Fees

Payment may be made by the following means:

- Remitting payment by check or cash to the University Business Office, Student Success Center, Room 5100 by mail or in person.
- Remitting an electronic check payment or credit card payment online through M3 or through the University Business Office website. This service is provided by an outside vendor.
- Contracting with our third-party vendor in M3 to set up an installment payment plan prior to the semester due date. Payment plans are available to all enrolled students and have a small enrollment fee. All payments must be completed during the applicable semester and the plan must be paid in full in order to continue enrollment at JMU.

- Accepting financial aid, completing the Master Promissory Note (MPN), Entrance Counseling (EC) and the Loan Request Form (LRF) as applicable by the payment due date for an amount that covers the entire balance due.
- Any combination of personal payments, installment payment plan and/or financial aid that covers the entire balance due.
- Personal payments may be made by a combination of personal check, cash, money order, cashier's check, electronic check and credit cards.

Payments drawn on foreign banks must be converted to U.S. dollars prior to transmittal to the university or payment must be remitted through the M3 system Convera link. The student's account number (campus ID number) should be included on all payments to ensure its application to the proper account.

Debts owed to the university are governed by the following policies:

- No credit for university work may be given to any student for a diploma, teacher's license or transfer purposes until all debts to the university have been settled.
- Until a student's account is paid in full, he/she will be ineligible for readmission or registration for a future semester.
- Upon recommendation of the director of the University Business Office and with the approval of the Assistant Vice President for Finance, students in debt to the university may be suspended from their classes or may be withdrawn.

Alternative Methods of Instruction Delivery

The university reserves the right to provide some or all instruction and related academic activities through alternative methods of delivery, including remote delivery. It also reserves the right to change the method of delivery before or during an academic term in the event of a health or safety emergency or other circumstance when it determines that such change is necessary or in the best interests of the campus community. Tuition and mandatory fees will not be reduced or refunded if the university changes the delivery method for any or all of an academic semester.

Audit Fees and Internships

A student registering to audit a course or for an internship will pay the same tuition and fees as one who registers for credit.

Examination for Credit Fee

Arrangements for attempting credit by departmental examination may be made by paying a nonrefundable \$25 fee to the University Business Office and presenting the receipt to the Office of the Registrar.

Late Fee

As of July 1, 2009, the Commonwealth of Virginia has passed legislation requiring late fees to be placed on past due balances owed to the university. The mandatory late fee is 3% of the balance due.

Returned Check Fee

A \$50 per check fee is assessed for checks returned unpaid to the university. If a check is returned, the University Business Office staff will notify the student by email. If the student does not make appropriate alternative payment as specified, the student's class registration will be canceled and the student may

be withdrawn from the university. The university will also hold the student's records, future registration, transcripts, teaching license and diploma until the check is redeemed. When a Returned Check Hold is placed on a student's financial account, any future payment by personal check will require 15 business days to clear before a hold is released.

Service Fee

Electronic Student Account payments made by credit card through MyMadison or at UBO's website will be assessed a service fee by the outside vendor. This fee is based on the total charges paid. The calculated amount is displayed separately, assessed at the time payment is made and cannot be refunded. There is no fee charged for electronic check payment.

Specialized Class Fees

Certain courses which use off-campus facilities have additional charges which will be determined at the time the course is offered. Certain courses may require additional fees.

Specialized Program Tuition

Some courses offered through the College of Business and the School of Nursing require additional tuition charges.

Collection of Past Due Accounts

Financial Information and Disclosure Statement

Students are expected to access financial information through M3 in MyMadison. Failure to receive email notification of posted electronic billing statement is not a justification for granting immunity in financial matters. Failure to access available data through self-service access via MyMadison or to read and comply with university regulations will not exempt students from whatever financial penalties they may incur.

Course Cancellation

Failure to attend a course after registering is not justification for elimination of charges. A student must officially drop a course to qualify for a refund or release of charges by the drop/add deadline posted by the Office of the Registrar. Failure to pay will not release a student from the responsibility for these charges.

Outstanding Debts/Delinquent Accounts

Students with outstanding debts are denied any registration activity and access to an official transcript of their grades until all debts are paid in full. Student accounts are subject to the financial policies of James Madison University, as specified in the undergraduate catalog. Unless students resolve the debt, the university will advance the matter to the next step in the collection process.

Collection Activities

Once an account is 60 days past due, the delinquent balance is subject to transfer to a collection agency. At that point, repayment arrangements must be made directly with the collection agency, and the account holder may be responsible for the additional fees associated with collection efforts. Accounts turned over to the Virginia Office of the Attorney General are subject to fees and penalties pursuant to Virginia law.

Collections in the Commonwealth of Virginia

The university pursues debt in accordance with the guidelines set forth by the Commonwealth of Virginia in the Virginia Debt Collection Act. Virginia state law requires that the university make every attempt to collect past due amounts owed to state agencies. If, after 60 days, full payment of a debt has not been received, the student account will be placed with a collection agency or the Virginia Office of the Attorney General. Accounts turned over to the Office of the Attorney General are subject to additional fees and penalties pursuant to Virginia law.

Students also risk tarnishing their credit rating and will be subject to further enforcement proceedings. Collection efforts are costly to the student. Avoid them by paying on time. Collection fees cannot be appealed. If a student finds that his/her account has been referred to a collection company, he/she should contact the company immediately to make payment arrangements.

Additionally, the account can be listed by the Credit Bureau as a bad debt, a delinquent account can be collected in full from income tax refunds, lottery winnings, or other refunds due from the state, and the Attorney General's Office may pursue a court judgement on the account. Timely payment is strongly encouraged so that collection efforts can be avoided.

University Agents

Todd, Bremer and Lawson, Inc.
Post Office Box 36788
Rock Hill, SC 29732-0512
Phone: 1-800-849-6669
Fax: 1-803-328-5211

Williams and Fudge
Post Office Box 11590
Rock Hill, SC 29731-6266
Phone: 1-800-849-9791
Fax: 1-803-329-0797

Setoff Debt Collection Act

Under the provisions of this act, an individual's Virginia income tax refund or lottery winnings will be subject to the university's claim for any unpaid balance of tuition and fees. Any communication disputing an amount owed must be submitted in writing to the director of the University Business Office.

Eligibility for In-state Tuition

Eligibility for in-state tuition charges is based on the provisions of Section 23.1-500 of the Code of Virginia in effect on the first day of classes for each term. Students who exceed the minimum number of credit hours required for graduation by 25 percent should refer to the UBO website for additional tuition charges. A link to the Code of Virginia guidelines can be found on the website of the University Business Office. This statute limits in-state tuition to those with Virginia domiciliary status. Domicile is defined as the "present, fixed home to which you return following temporary absences and at which you intend to stay indefinitely." If there is any question of the right to classification as a domicile of Virginia, it is the student's obligation, prior to the first day of classes for the semester, to raise the question with JMU administrative officials.

Restriction on In-state Tuition

In accordance with Virginia law, in-state students initially entering a Virginia public institution during or after the fall 2006 semester will be assessed a surcharge for any credit hours over 125% of their degree program

requirements. Exceptions may apply when credit hours are required for an additional program.

Dependent Students

To qualify for in-state tuition, a dependent student or an un-emancipated minor shall establish by clear and convincing evidence that, for a period of at least one year prior to the date of the alleged entitlement, the person through whom he/she claims eligibility was domiciled in Virginia and had abandoned any previous domicile, if another existed. A link to the Code of Virginia, as well as Residency Guidelines, can be found on the University Business Office website under the section "Residency Requirements." Certain exceptions apply to Active Duty Military and veteran dependents.

Independent Students

The statute defines an independent student as one whose parents have surrendered the right to his/her care, custody and earnings; have ceased to support him/her and have not claimed him/her as a dependent on federal and state income tax returns for at least 12 months prior to the alleged eligibility. Certain exceptions apply to Active Duty Military and veteran students.

To qualify for in-state tuition, an independent student shall establish by clear and convincing evidence that for a period of at least one year immediately prior to the date of the alleged entitlement, he/she was domiciled in Virginia and had abandoned any previous domicile, if such existed.

Domiciliary status shall not ordinarily be conferred by the performance of acts which are auxiliary to fulfilling educational objectives or are required or routinely performed by temporary residents of the commonwealth. Mere physical presence or residence primarily for educational purposes shall not confer domiciliary status. A matriculating student who has entered an institution and is classified as an out-of-state student shall be required to rebut by clear and convincing evidence the presumption that he/she is in the commonwealth for the purpose of attending school and not as a bona fide domiciliary.

Initial determinations of eligibility are made by the Office of Admissions (incoming first year students, re-entries and transfers), The Graduate School (graduate students) and Professional and Continuing Education (for continuing education and special students). Reclassification decisions on currently enrolled degree-seeking students are made by the director of the University Business Office.

To establish eligibility after entering JMU as an out-of-state student, an applicant must complete the reclassification form posted on the University Business Office website. For information on special provisions of Section 23.1-500, contact the Office of Admissions, The Graduate School, Professional and Continuing Education or the University Business Office.

Once a student receives an initial determination of eligibility, he/she may appeal for a review of the application by contacting the office which made the decision within 30 days. If there is any question of the right to classification as a domicile of Virginia, it is the student's obligation prior to or at the time of registration to raise the question with the administrative officials of James Madison University. Any party aggrieved by a final administrative decision shall have the right to petition within 30 days for a review by the Circuit Court of Rockingham County.

A change to in-state status may be made only when the completed application for reclassification form is received by the University Business Office prior to the first day of classes for that semester. Students are responsible for paying out-of-state tuition rates until in-state status has been approved.

Room and Board

Part-time students cannot purchase a housing contract without prior approval of the **Office of Residence Life**. Students residing in university housing are required to have a Meal Plan with their housing contract.

Commuter students may purchase one of several meal plans through **Card Services** in the **Student Success Center** and can have the charge posted to their student account. Commuter contracts purchased after the first week of classes are due immediately. If a student arrives late by 10 or fewer days, the boarding fee will not decrease. The only exception, however, is lateness because of hospital confinement. If a student is late by seven days or longer due to hospital confinement, the university will review adjusting the board fee. Contact **Card Services** in the **Student Success Center** on the second floor at (540) 568-6446 for additional information.

Refunds

In the event that circumstances beyond the control of the university render the continued provision of certain auxiliary services or programs, including housing and dining services, pursuant to the normal course of operations impossible, unsafe or otherwise impracticable, the university reserves the right to cease or alter the means of delivery of such services or programs. In such an event, payments of the housing fee, dining fee and comprehensive fee, which funds the provision of certain services or programs, previously made by the student may be refunded on a pro rata basis for the period for which such services or programs were altered or made unavailable to the student. The student understands that any refund of the housing, dining or comprehensive fee issued by the university pursuant to this paragraph may be subject to modification or reduction, to the extent the university reasonably deems necessary, in order to address costs already incurred by the university in preparing and providing all such services and/or programs.

An overpayment of a student account from personal funds can be either refunded or posted to a future semester as a payment. An overpayment created by a credit card payment must be refunded back to the credit card. Financial Aid refunds are processed automatically in accordance with applicable Title IV regulations. All overpayments are refunded to the student except for Parent PLUS loans, which are refunded as specified by the parent in the PLUS application. All student refunds are processed through BankMobile Disbursements, a technology solution powered by BMTX, Inc. A refund

preference must be selected by using the "My Refunds" link in MyMadison. Questions concerning refund procedures can be directed to the University Business Office at (540) 568-6505, by email at ubo@jmu.edu or by going to the UBO's office in the Student Success Center during regular business hours.

Parents who are eligible to receive a refund on their federal Parent PLUS loan will receive a paper check at the home address of record.

Students who officially withdraw from the university by the deadline for fall semester or by the deadline for spring semester will be refunded all tuition and fees except the tuition and room deposit.

Withdrawing after the end of this period will not reduce tuition charges. Board fees will be prorated from the dining hall opening date. After the deadline dates, refunds will be for only a pro rata share of the board fee. Room refunds will be made in accordance with the Residence Life refund schedule as stated in the current Residential Contract.

Students who withdraw from the university due to physical or mental health reasons certified by an appropriate health care provider or for unavoidable emergency or extenuating circumstances approved by the Office of the Registrar will be refunded a pro rata share of tuition, fees and board. Refunds for withdrawal from the university are calculated from last date of attendance as approved by the Office of the Registrar. Room refunds will be made in accordance with the Residence Life refund schedule as stated in the current Residential Contract.

For further information on withdrawal from the university, see the section Withdrawal from the University.

Room and Tuition Deposits

New Students

For new students, a deposit of \$400 is required to confirm their acceptance of the offer of admission. When a student pays the deposit, the money is applied to the student's account. The deadline for this deposit is May 1. Refunds after the stated deadlines will be made only for personal illness certified by a physician or other extenuating circumstances approved by the Dean of Admissions.

Returning Students

For returning students who want to live in university residential facilities, a signed room and board contract must be submitted online to the Office of Residence Life at <http://www.jmu.edu/orl>. A contract fee will be assessed when the contract is submitted.

Financial Aid, Scholarships and Student Employment

Phone: (540) 568-7

820Email: fin_aid@jmu.edu

Location: Student Success Center, Room 5200

Website: <http://www.jmu.edu/financialaid/>

Scholarships, Grants and Loans

The Office of Financial Aid and Scholarships helps qualified students secure a financial aid package designed to meet their financial needs. An aid package may consist of grants, scholarships, loans and work-study. Students interested in information on financial assistance programs should visit the financial aid website at <https://www.jmu.edu/financialaid>, contact the Office of Financial Aid and Scholarships at the above address or send an email to fin_aid@jmu.edu. The website includes a link to JMU Terms and Conditions for Financial Aid – Consumer Information, which provides information regarding general financial aid rules and required disclosures.

Application Procedures and Deadlines

All financial aid applicants must undergo a standardized federal "needs analysis" by completing the Free Application for Federal Student Aid (FAFSA). To receive priority consideration, it is essential that applicants ensure their FAFSA has reached the federal government by March 1, prior to the academic year for which they are seeking financial assistance. Failure to apply by the priority filing date may cause delays in receiving aid and can result in less attractive aid packages.

A student must complete a FAFSA before financial aid eligibility can be determined for the following sources of aid:

- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant
- Commonwealth Award
- Virginia Guaranteed Assistance Program
- Federal Subsidized Direct Loan
- Federal Unsubsidized Direct Loan
- Federal Parent PLUS Direct Loan
- Federal Work-Study Program
- Need-based JMU Foundation Scholarships
- University Grants

When students file the FAFSA, the federal processor calculates their Expected Family Contribution (EFC). The EFC is an estimate of the family's ability to contribute to the student's overall educational expenses for one year. JMU calculates the student's financial "need" by subtracting the EFC from the Cost of Attendance (described later). Due to limited funding, grants are awarded to students who have the highest financial need, and in many cases to those who met the priority FAFSA filing date.

Financial aid recipients must complete the FAFSA each school year. Amounts and types of assistance may vary from year to year. If funds are available, the Office of Financial Aid and Scholarships continues to assist students who meet the following conditions:

- Complete the FAFSA, with precedence given to those who apply by the priority filing date of March 1, prior to the academic year for which they are seeking financial assistance.
- Meet general eligibility requirements for aid as defined by the FAFSA.
- Maintain Satisfactory Academic Progress.

The financial aid office sends an electronic notification to students offered financial assistance by JMU. The financial aid offer has important information, so the recipient should follow all instructions to ensure the completion of required forms. Students can find consumer information regarding the financial aid process, including pertinent rules and regulations, through the financial aid

website. If any of the information included in the financial aid offer is incorrect, the student should immediately notify the Office of Financial Aid and Scholarships. Financial aid is offered based on FAFSA information, as well as the student's status at JMU (e.g., academic level, enrollment status and residency).

Parents of dependent undergraduate students may qualify for a Federal Parent PLUS Direct Loan. For those eligible to apply for the Parent PLUS, the financial aid office sends aid notifications to parents with instructions for applying. The parent aid notice does not include any information about student aid offers.

Federal and state regulations also require the Office of Financial Aid and Scholarships to consider any outside sources of assistance when offering financial aid. These outside sources can be JMU scholarships, private scholarships, veteran's benefits, tuition waivers, etc. The student's financial aid package may fluctuate throughout the year based on changes in FAFSA information, JMU status or the receipt of additional aid. Financial aid offers are usually sent to returning students in early summer. New students may receive financial aid offers in the spring prior to enrollment.

Cost of Attendance

An important part of determining a student's eligibility for financial aid is calculating a Cost of Attendance. In accordance with federal regulations, JMU has developed a Cost of Attendance (i.e., budget) for anticipated expenses a student may incur during the current school year. These expenses include tuition, housing, food, books and supplies, travel and personal. Housing and food can refer to either residence hall or off-campus living expenses, depending upon a student's response on the FAFSA. Expenses are also considered for students who live at home with parents or relatives, but the Cost of Attendance is lower than for those living elsewhere. Travel expenses include items such as gasoline, vehicle maintenance and insurance. Personal expenses include laundry, clothing and entertainment. Many of the elements in the Cost of Attendance are estimates, so it is possible for a student to spend more or less than anticipated during any given year.

Repeating Coursework

For information on how repeat courses may affect a student's financial aid, visit: <https://www.jmu.edu/financialaid/terms-and-conditions.shtml>

Classes and Program of Study Applicability

Schools can only consider classes that count toward degree requirements when offering financial aid. For example, if a student takes a full-time course load (i.e., 12 undergraduate credits) and nine of the 12 hours are financial aid eligible, then that student could only receive financial aid for nine hours. For information on determining what classes can be counted for financial aid purposes, visit: <https://www.jmu.edu/financialaid/terms-and-conditions.shtml>

Satisfactory Academic Progress

Website: <https://www.jmu.edu/financialaid/learn/sap/index.shtml>

In order to qualify for financial assistance, federal regulations indicate that a student must meet certain academic requirements as determined by the Office of Financial Aid and Scholarships. State, federal and some institutional aid programs are subject to the Satisfactory Academic Progress (SAP) policy. For a complete description of the policy, refer to the SAP website.

Understanding Satisfactory Academic Progress (SAP)

In accordance with federal regulations, the Office of Financial Aid and Scholarships must ensure that students meet both qualitative (grade-based) and quantitative (time-related) requirements before certifying eligibility for financial aid. The term qualitative refers to grade point average (GPA). Quantitative components include both pace and maximum time. Refer to the SAP website for a detailed description of each SAP component.

Students who have not completed the required number of hours or achieved the required cumulative GPA are not eligible to receive financial aid until such time that they meet the requirements. If extenuating circumstances contributed to students' inability to meet SAP requirements, they may request reconsideration by submitting an Appeal Form with appropriate supporting documentation. This form is available on the SAP website.

Refer to the JMU Terms and Conditions for Financial Aid -- Consumer Information for more information on how repeating courses may affect financial aid.

Evaluation Process

All undergraduate students who file a Free Application for Federal Student Aid (FAFSA) are subject to the SAP policy. Upon receipt of the results of a student's FAFSA each year, the Office of Financial Aid and Scholarships will evaluate the student's SAP status before offering financial assistance. If students were unable to meet SAP requirements during their previous enrollment, they will receive notification regarding their area(s) of deficiency. Students who do not meet SAP standards cannot receive financial aid.

Appeals Process

If extenuating circumstances contributed to students' inability to meet SAP requirements, they may request reconsideration by submitting an Appeal Form with appropriate supporting documentation. This form is available on the SAP website, along with current appeal deadlines.

When students resolve their academic deficiency midyear, an appeal is still required and must include all the normal components of that process, including an explanation of extenuating circumstances and supporting documentation.

Students choosing not to appeal may become eligible for assistance in the subsequent award year by attending the current year without financial aid and resolving their academic deficiency by the end of it.

Grants

Federal Pell Grant

Pell grants are generally awarded only to undergraduate students who are seeking their first bachelor's degree and whose Expected Family Contribution (EFC) falls within the federally prescribed range.

Federal Supplemental Educational Opportunity Grant

SEOG is awarded to Pell-eligible students with the highest financial need as long as funds continue to be available.

Commonwealth Award

The Commonwealth Award is a need-based grant for Virginia residents who are seeking an undergraduate degree. The maximum award will not exceed the cost of tuition and fees. Awards will be made as long as funds are available, with precedence given to those who met the FAFSA priority filing date.

Virginia Guaranteed Assistance Program

VGAP is a need-based grant for undergraduate, full-time Virginia residents who graduated from a Virginia high school with at least a 2.5 GPA. The maximum award will not exceed the cost of tuition, fees and an allowance for books. Awards will be made as long as funds are available, with precedence given to those who met the FAFSA priority filing date.

University Grants

These institutional grant programs are primarily available to undergraduate students. The FAFSA is used to determine each student's need level, and grants are awarded accordingly. Awards are made as long as funds continue to be available.

Student Loans

Federal Direct Loan Program

The Direct Loan (subsidized and unsubsidized) is a long-term, low-interest loan for which undergraduate students may apply. Interest rates for Direct Loans disbursed on or after July 1, 2022 – June 30, 2023 are as follows:

- Undergraduate Subsidized Direct Loans = 4.99%
- Undergraduate Unsubsidized Direct Loans = 4.99%

Once disbursed this interest rate is fixed over the life of the loan. Interest rates on new loans will change on an annual basis each July 1st. Visit the financial aid website for up-to-date information and interest rates.

For a subsidized loan, the government will pay the interest while the student is in school. For an unsubsidized loan, the student can either pay the interest while in school or have it capitalized (i.e., added to the principle). Payments on the principle amount do not begin until six months after the student graduates or drops below half-time status.

Students must be making satisfactory academic progress and be enrolled at least half time for the period covered by the loan. Each year, dependent undergraduate students may borrow up to \$5,500 at the first-year level (no more than \$3,500 subsidized), up to \$6,500 at the sophomore level (no more than \$4,500 subsidized) and up to \$7,500 at the junior and senior levels (no more than \$5,500 subsidized). Independent undergraduate students may borrow no more than \$9,500 at the first-year level, up to \$10,500 at the sophomore level and no more than \$12,500 at the junior and senior levels.

Dependent undergraduate students may not borrow more than \$31,000 in Direct Loan funds during their undergraduate career (no more than \$23,000 subsidized). Independent students may borrow no more than \$57,500 during their undergraduate career (no more than \$23,000 subsidized). For students who received prior Federal Stafford Loans at JMU or another institution, the career total is the sum of all Direct and Stafford Loans.

Federal Parent PLUS Direct Loan

Biological parents, adoptive parents or any stepparent of a dependent undergraduate student listed on the FAFSA may apply for a loan through the

Parent PLUS Direct Loan program. The borrower must be a citizen or permanent resident of the United States. In addition, the student must be making satisfactory academic progress and be enrolled at least half time for the period covered by the loan. A student must complete a FAFSA before Parent PLUS Direct Loan eligibility can be determined.

Parent PLUS borrowers may apply for an amount up to the Cost of Attendance minus any other financial aid received by the student for that academic year. The interest rate on the Parent PLUS disbursed after July 1, 2022 – June 30, 2023 is 7.54%. Once disbursed this interest rate is fixed over the life of the loan. Interest rates on new loans will change on an annual basis each July 1st. Visit the financial aid website for up-to-date information and interest rates.

Interest begins to accrue on the date of the first loan disbursement. The first payment is due after the last disbursement for the loan period. Parents who wish to delay repayment on the PLUS loan should contact the Direct Loan Servicing Center.

Alternative/Private Loans

Some banks offer credit-based alternative loans to students and parents who either do not qualify for the Direct or PLUS Direct loans or cannot receive enough money through these loan programs to cover their educational expenses. Terms of these private loans vary. Undergraduate borrowers are typically required to have a credit-worthy co-signer. The financial aid office strongly encourages students and parents to exhaust other sources of aid before pursuing an alternative loan. Interested individuals may obtain more information about alternative loan options from the financial aid website.

JMU Scholarships

Website: <https://www.jmu.edu/scholarships/>

Many scholarships for students are established through the JMU Foundation and individual university departments. Scholarships are awarded either through the Office of Financial Aid and Scholarships or by the appropriate college or division according to established criteria. Awards are based upon merit and/or need. To be considered for need-based scholarships, students must complete the FAFSA. For information on specific scholarships, students should visit the scholarships website.

Private Off-campus Scholarships

Private off-campus scholarships include those awarded to students by outside (non-JMU) organizations. These scholarships are credited to the student's account upon receipt of the funds. If this type of scholarship is to be used to pay tuition and fees, the funds must be received prior to the payment due date for that semester.

Mail all off-campus scholarship checks to:

University Business Office
MSC 3516
738 South Mason Street
Harrisonburg, VA 22807

The student is responsible for compliance with the provisions of the scholarship (e.g., grade reporting and verification of attendance).

Virginia Military Survivors and Dependents Education Program (VMSDEP)

This program provides eligible students, as confirmed by the Virginia Department of Veterans Services (DVS), with waiver of all tuition and mandatory fees at a Virginia public college or university. In addition, as funds are available, eligible students may receive a stipend to offset other educational expenses, such as room and board.

Virginia Line of Duty Waiver

Students whose parent or spouse was disabled or killed in the line of duty while employed or serving as a public safety officer or firefighter with the Commonwealth of Virginia or one of its political subdivisions shall be entitled to free undergraduate tuition and the payment of required fees under certain conditions.

Student Employment

Website: <https://www.jmu.edu/student-employment>

JMU employs both graduate and undergraduate students in academic, administrative or service-oriented areas. Students must be degree-seeking and enrolled to be employed in these positions. They receive payment for their services via direct deposit twice a month. Wages earned in student positions are not applied directly toward the cost of tuition; however, they serve as a source of income for weekly living expenses. There are three work programs at JMU.

Federal Work-Study Program

Students establish eligibility for Federal Work-Study employment by demonstrating financial need through their FAFSA. Those who are offered Federal Work-Study will need to apply and interview with employers to secure a position; however, employment is not guaranteed. These jobs provide a student with the opportunity to earn a paycheck throughout the year. If the student reports FWS earnings as need-based employment on the FAFSA, then the money earned through this program is not counted as income when determining financial aid eligibility for that year.

Institutional Employment

Institutional employment positions are on-campus positions available to degree-seeking JMU students regardless of financial need. To obtain additional information concerning available on-campus positions, refer to JobLink at <https://joblink.jmu.edu>. There are approximately 2,000 Institutional Employment positions available on campus each year. Students may not work more than 20 hours per week in any on-campus position during the fall and spring semesters.

Off-Campus Part-Time Jobs

The Off-Campus Part-Time Job Program is designed to assist students in securing off-campus, part-time employment regardless of their financial aid eligibility. The program's coordinator works with local employers to promote hiring JMU students and to assist with advertising their opportunities. Additionally, the program is centered on creating real-world experiences for students that will not only increase self-knowledge, but also develop marketable skills that will provide a solid foundation for securing career options beyond graduation.

Colleges

College of Arts and Letters
College of Business
College of Education
College of Health and Behavioral Studies
College of Integrated Science and Engineering
College of Science and Mathematics

College of Visual and Performing Arts
Honors College
School of Professional & Continuing Education
The Graduate School
University Studies

College of Arts and Letters

Traci A. Zimmerman, **Interim Dean**
Melinda J. Adams, **Associate Dean**
Siân E. White, **Associate Dean**
Karina Kline-Gabel, **Assistant Dean**
Shannon L. Wilson, **Director of Professional Development and Engagement**

Phone: (540) 568-6334
MSC: 2105
Location: Harrison Hall, Suite 1103
Website: <http://www.jmu.edu/cal>

Academic Units

School of Communication Studies
Lori Britt, Interim Director

Department of English
Rebecca "Becky" Childs, Head

Department of Foreign Languages, Literatures and Cultures
José Ignacio Barrio Olano, Interim Head

Department of History
P. David Dillard, Interim Head

Department of Justice Studies
Peggy Plass, Head

School of Media Arts and Design
Joe Hinshaw, Interim Director

Department of Philosophy and Religion
Kenneth Pearce, Head

Department of Political Science
Kerry F. Crawford, Head

Department of Sociology and Anthropology
Liam M. Buckley, Head

School of Writing, Rhetoric and Technical Communication
Michael Smith, Director

Mission Statement

The College of Arts and Letters combines the inclusive community of a small liberal arts college with the innovation of a research university. Located on the beautiful quad, the college offers high-quality programs across thirteen majors with focuses ranging from culture, communication, and creativity to politics, ethics, and justice.

Our students have opportunities to shape their own education by selecting from the various minors housed in the college or working side-by-side with faculty on community-engagement or research projects. Arts and Letters graduates enter the working world as strong written and oral communicators, critical thinkers, and problem solvers.

Goals

In addition to the special goals of each major, all programs in the college are committed to helping the students achieve the following common objectives:

- Improve foundational skills fostered by general education courses: writing, critical thinking, information access through technology and, where appropriate, foreign languages.
- Develop the ability to use writing to acquire knowledge and to communicate ideas effectively through writing-intensive courses required in the major.

- Enrich perspectives essential to building the skills, knowledge and relationships for 21st century citizenship, global awareness, and appreciation of racial and cultural diversity in the United States.
- Provide significant active-learning experiences through field courses, research projects, internships, studies abroad and simulations.

Majors and Minors

Students may select from a broad spectrum of major and minor programs in the seven departments and three schools. The departments and schools fully describe their programs in the "Academic Units" section.

Cross Disciplinary Activities

In addition to departmental majors and minors, the college offers a wide array of interdepartmental majors, minors, pre-professional programs, general education courses, annual events and supporting services, some of which reach out to the regional community. Information about these programs may be found on the "Majors and Programs" tab of the College of Arts and Letters website.

Centers and Institutes

African, African American, and Diaspora (AAAD) Studies Center

Delores Phillips, Director

Phone: (540) 568-7772

Email: phillidp@jmu.edu

The African, African American, and Diaspora (AAAD) Studies Center provides interdisciplinary knowledges, programming and initiatives related to Black peoples, histories, cultures, languages, economics, philosophies, ideas and socio-political structures. The center's core mission is to cater to student-faculty constituencies with academic interests in the peoples, cultures and institutions of Africa and the African Diaspora. Each February, the center hosts the Annual African, African American, and Diaspora Studies Interdisciplinary Conference, which welcomes scholars across the world.

The American Political Reform & Innovation Lab (APRILab)

Tim LaPira, Director

Phone: (540) 568-5309

Email: lapiratm@jmu.edu

The American Political Reform & Innovation Lab (APRILab) is a nonpartisan, civic- and community-engaged political science and data science research lab dedicated to institutional political reform.

James Madison Center for Civic Engagement

David Kirkpatrick, Executive Director

Phone: (540) 568-7549

Email: kirkpadx@jmu.edu

As a nonpartisan entity, The James Madison Center for Civic Engagement (JMU Civic) emphasizes the acquisition of **knowledge** to make one a more informed participant in our democracy, **skills** to make one a more effective participant and **values** that embrace pluralism, open-mindedness, empathy, respect, diversity and inclusion.

The Cohen Center for the Humanities

Seán McCarthy, Director

Phone: (540) 568-7943

Email: mccartsr@jmu.edu

Funded by a generous gift from the late Ralph Cohen, The Cohen Center for the Humanities serves the university community with innovative programming related to interdisciplinary graduate education and the professionalization of graduate students. Through the use of speakers, workshops, roundtables and presentations, the center engages important issues that affect us in a modern, technological world, on a local, national and global level.

Furious Flower Poetry Center

Lauren Alleyne, Executive Director

Phone: (540) 568-8883

Email: alleynlx@jmu.edu

The nation's first academic center for Black poetry, the Furious Flower Poetry Center is committed to ensuring the visibility, inclusion and critical consideration of Black poets in American letters, as well as in the whole range of educational curricula. Our programming seeks to cultivate an appreciation for poetry among students of all levels—from elementary to graduate school and beyond. In addition, Furious Flower seeks to support and promote Black poets at all stages of their careers and to preserve the history of Black poets for future generations.

Institute for Constructive Advocacy and Dialogue

Lori Britt, Co-Director

Phone: (540) 568-5028

Email: brittll@jmu.edu

Rob Alexander, Co-Director

Phone: (540) 568-3771

Email: alexanrw@jmu.edu

In designing and guiding conversations that help people think together productively, we strive to create conversations that engage, connect and sustain communities. We seek to create a world that engages in dialogue and deliberation across differences as a cultural norm and as an effective tool for addressing the challenges and opportunities of civic life.

Logic and Reasoning Institute

Thomas Adajian, Director

Phone: (540) 568-6394

Email: adajiatr@jmu.edu

The Logic and Reasoning Institute promotes the interdisciplinary study of logic and reasoning at James Madison University. The LRI sponsors and encourages coursework and research, as well as promoting the teaching and application of logic across the university

Center for Public Broadcasting/ WMRA-WEMC

Matt Bingay, Director

Phone: (540) 568-6221

Email: wmra@jmu.edu

Website: <http://www.wmra.org>

The Center for Public Broadcasting's mission is to inform, connect and engage communities through journalism, broadcasting and outreach. It serves over 50,000 listeners in the Shenandoah Valley, Charlottesville and Farmville areas.

The center comprises a network of non-commercial public radio stations, serving Harrisonburg at 90.7 FM, Charlottesville at 103.5 FM, Lexington at 89.9 FM and Winchester at 94.5 FM, and one standalone station, WEMC, serving Harrisonburg at 91.7 FM. The WMRA network stations are licensed to the James Madison University Board of Visitors. WEMC is licensed to Eastern Mennonite University, but is operated entirely by the center. Much of WMRA's programming is rebroadcast by WMLU 91.3 FM, the station owned by Longwood University in Farmville, Virginia. WMRA and WEMC are members of National Public Radio, and are affiliated with Public Radio International and American Public Media. The stations broadcast 24 hours per day year-round, offering extensive in-depth news coverage and classical, folk, blues and jazz music. The center also operates Valley Voice Radio Reading Service for the print-impaired. Listeners and local businesses contribute nearly three-quarters of the center's annual budget.

Annual Events

CAL Career Readiness Conference

Shannon Wilson, Director

Phone: (540) 568-8904

Email: wilso4sl@jmu.edu

The College of Arts and Letters Career Readiness Conference is a multi-day event open to CAL students and features JMU alumni from all CAL majors discussing the wide range of career opportunities available to graduates with a liberal arts degree. The program of alumni panels, career-readiness workshops, networking opportunities, and a keynote speech provides an opportunity to learn more about the transition from college to post-graduate life. The event

cultivates and strengthens relationships among alumni, current students, and CAL faculty and staff.

Conference on Global Issues

The Department of Foreign Languages, Literatures and Cultures organizes a yearly conference on global issues, held in the spring. The conference brings together scholars and researchers from a variety of disciplines to address and assess specific global issues, issuing a call for papers in the fall on an announced topic. Proposals for papers, panels and workshops should be sent to the coordinator.

Madison Writing Awards

Madison Writing Awards (MWA) is a university-wide biennial competition that celebrates writing across the curriculum in all undergraduate academic programs. Winners are recognized at a spring awards reception and the top papers receive generous cash prizes. These awards reflect the commitment of the School of Writing, Rhetoric and Technical Communication and the College of Arts and Letters to promote cross-disciplinary dialogue and engagement as well as to acknowledge the power of writing in all its forms and contexts.

MadRush

Siân White

Phone: (540) 568-3993

Email: white2se@jmu.edu

The MadRush Undergraduate Research Conference features outstanding work by undergraduate humanities and social science majors. Held every spring, it attracts students from across the eastern United States and has become one of the largest humanities and social science undergraduate research conferences in the region.

College of Business

Michael E. Busing, **Dean**

Scott R. Gallagher, **Associate Dean, Academic Affairs**

Molly G. Brown, **Associate Dean, Undergraduate Programs**

Cheryl Yoder Mast, **Assistant Dean, Finance and Personnel**

Demetria Henderson, **Assistant Dean, Inclusive Excellence**

Phone: (540) 568-2785

MSC: 0207

Location: Hartman Hall, 3009-3020

Website: <http://www.jmu.edu/cob>

Academic Units

School of Accounting

Alexander L. Gabbin, Director

Department of Computer Information Systems and Business Analytics

Rhonda A. Syler, Head

Department of Economics

Charlene Kalenkoski, Head

Department of Finance and Business Law

Hui Sono, Head

Department of International Business

Irvine "Bud" Clarke, III, Head

Department of Management

Elizabeth "Liz" Karam, Head

Department of Marketing

Theresa B. Clarke, Head

Mission Statement

The JMU College of Business is a learning community committed to excellence in:

- Preparing students to be engaged, principled business professionals and leaders;
- Advancing scholarship in business disciplines; and
- Enhancing organizational performance through our outreach activities.

Vision Statement

To be regarded as a leader in preparing collaborative business partners engaged with ideas and the world.

Values

Integrity: We are a community dedicated to honesty, mutual respect, ethical reasoning, and responsible behavior.

Intellectual Growth: We value academic excellence achieved through the intellectual curiosity and growth of both faculty and students, and through the creation and maintenance of a challenging and rigorous learning environment that encourages critical thinking and life-long learning.

Community: We value a supportive and inclusive culture that provides equal opportunity to succeed, where diverse ideas, backgrounds, and experiences are celebrated and given voice to strengthen our community, creating a sense of belonging.

Engagement: We value an engaged, active learning environment inside and outside the classroom. We enrich the student experience through mutually beneficial internal and external relationships.

Innovation/Collaboration: We value initiative, creativity, collaboration, and entrepreneurial spirit. We promote new ideas and solutions that advance intellectual growth and have a positive impact.

Overview

The College of Business offers baccalaureate degree programs leading to a Bachelor of Business Administration (B.B.A.), a Bachelor of Arts (B.A.), and a Bachelor of Science (B.S.). All degree programs offered by the College of Business are accredited by AACSB International – The Association to Advance Collegiate Schools of Business. The following academic majors are offered as a B.B.A.: accounting, computer information systems, economics, finance, international business, management, and marketing. Students may also earn a B.A. degree or B.S. degree in economics. Quantitative finance is offered as a B.S. degree. The B.B.A. degree is comprised of essentially the same general structure, consisting of the four components shown below:

- General Education component
- B.B.A. core component
- Major component
- Electives

General Education Component

Please consult the General Education section of the catalog for full requirements. Note that MATH 205, or MATH 235, or ECON 200 satisfy requirements in both General Education and the BBA core.

B.B.A. Core Component

B.B.A. majors must complete all of the B.B.A. core components as part of their degree program. The following courses comprise the B.B.A. Lower-Level Core Component:

COB 191. Business Analytics I (3 credits) ¹
COB 202. Interpersonal Skills (3 credits)
COB 204. Computer Information Systems (3 credits)
COB 241. Financial Accounting (3 credits)
COB 242. Managerial Accounting (3 credits) ^{4,5}
COB 291. Business Analytics II (3 credits) ²
ECON 200. Introduction to Macroeconomics [C4GE] (3 credits)
ECON 201. Introduction to Microeconomics (3 credits)
MATH 205. Introductory Calculus I [C3QR] or MATH 235. Calculus I [C3QR] (3–4 credits) ³

The following courses comprise the B.B.A. Upper-Level Core Component:

COB 300A. Integrative Business: Management (3 credits) ^{5,6}
COB 300B. Integrative Business: Finance (3 credits) ^{5,6}
COB 300C. Integrative Business: Operations (3 credits) ^{5,6}
COB 300D. Integrative Business: Marketing (3 credits) ^{5,6}
COB 318. Legal and Ethical Environment of Business (3 credits)
COB 487. Strategic Management (3 credits) ⁷

¹ MATH 220 may be substituted for COB 191.

² COB 191 or equivalent and MATH 205 or equivalent are prerequisites for COB 291.

³ Calculus is required but not used in calculating the B.B.A. core GPA. MATH 235 is preferred for Economics and Finance majors.

⁴ COB 241 must be taken before COB 242.

⁵ COB 242 is a prerequisite for COB 300 and is not used in calculating the B.B.A. core GPA.

⁶ All four COB 300 courses must be taken during the same semester.

⁷ COB 300 is a prerequisite or corequisite for COB 318. COB 318 is a prerequisite for COB 487.

⁸ COB 487 must be taken during the senior year.

Major Component

The seven B.B.A. majors offered by the College of Business consist of 24-33 major credit hours. Students pursuing a B.B.A. degree may take major courses after progressing to formal admission (see below) and after they have enrolled/completed COB 300. The major program component of the B.B.A. degree is designed to be completed in three traditional semesters after COB 300. Therefore, students should plan their course work with that timetable in mind.

Admission into the College of Business permits a student to enroll in COB 300 and to be formally admitted as a business B.B.A. major. However, some majors in the college may have standards and prerequisites that exceed those of the college as a whole. Hence, a student must meet both the College of Business requirements and the requirements of the major in which the student seeks to enroll. Refer to the appropriate sections of the catalog for specific degree requirements for the individual majors in the College of Business.

Recommended Course Sequence

A potential course sequence showing a four-year graduation track is shown below.

First Year:

COB 191. Business Analytics I (3 credits)¹
COB 204. Computer Information Systems (3 credits)
ECON 200. Introduction to Macroeconomics [C4GE] (3 credits)
ECON 201. Introduction to Microeconomics (3 credits)
MATH 205. Introductory Calculus I [C3QR] or MATH 235. Calculus I [C3QR] (3-4 credits)

¹ MATH 220 may be substituted for COB 191.

Sophomore Year, any courses listed above not completed in the first year, and:

COB 202. Interpersonal Skills (3 credits)
COB 241. Financial Accounting (3 credits)
COB 242. Managerial Accounting (3 credits)
COB 291. Business Analytics II (3 credits)

Progression Standards for the College of Business¹

Any student admitted to JMU can declare any major offered by the College of Business. However, students must make satisfactory progress in order to be formally admitted into the College of Business. Requirements to continue pursuing a B.B.A. degree, often referred to as progression standards or formal admission, are described below.

Students are formally admitted into the College of Business as a B.B.A. major and permitted to register for COB 300 when the following requirements are met:

- Submission of a completed application for admission into the College of Business is submitted to the COB Advising and Support Center according to the schedule shown below.
 - December 1 for the upcoming spring semester
 - February 15 for the upcoming summer session (if offered)
 - May 1 for the upcoming fall semester
- Successful completion with a GPA of 2.7 (or higher) in the following business core courses: COB 191, COB 202, COB 204, COB 241, COB 291, ECON 200, and ECON 201. Only grades earned at JMU will be used to calculate the B.B.A. core GPA.
- Successful completion of calculus and COB 242.

No core course needed for COB 300 admission may be attempted more than two times. An "attempted course" is one in which a final letter grade, including "W", "WP" and "WF," is recorded on the student's official JMU transcript. Furthermore, during or after a first attempt a student may face delayed registration permission for a second enrollment.

The university policy for calculating repeat-credit and repeat-forgive will be followed.

Students who fail to meet the requirements described above will be denied admission into the College of Business and will be referred to JMU University Exploratory Advising for assistance in choosing another major.

Students should consult with the major department for further progression requirements in the specific major.

¹ Requirements to be admitted into the College of Business are effective based on when a student intends to enroll in COB 300. Students are advised to consult the College of Business Advising and Support Center for current requirements.

Declaration of a Business Major

JMU students seeking to change/declare any major or minor in the College of Business (CoB) must be in "good standing," meaning they must have a cumulative grade point average of 2.0 or higher at the time when they submit a change/declaration of major/minor request. Students will follow the Office of the Registrar's procedure for making such requests. Students are expected to closely follow explicit departmental guidelines and deadlines for completing the process.

Declaring a major does not supersede the formal admission/progression standards of the College of Business for enrollment in COB 300 or junior-level courses in the CoB major programs. Declaring a major does not supersede admission requirements for specific academic programs in the CoB.

Business as a Second Major

A student enrolled in any JMU degree program other than the B.B.A. program who wishes to select a B.B.A. major field (i.e., accounting, computer information systems, economics, finance, international business, management or marketing) as a second major must meet the following courses:

- Successful completion of all B.B.A. core courses (refer to the B.B.A. core component section); and
- Successful fulfillment of all requirements specific to the major selected.
- Note that since the B.B.A. is a different degree than most B.A. and B.S. degrees at JMU, a student essentially has a double degree rather than just a double major.

Transfer Credit Policy

Transfer of Lower-level Courses that are offered at Upper-level at JMU

The College of Business (CoB) normally does not award transfer credit for courses that were taken at the 100-200 level if those courses are offered at the 300-400 level at JMU.

Transfer of Courses Toward the Major

Each program in the CoB will accept no more than two courses of transfer credit toward the major except in extraordinary circumstances. The major is defined as the course work required by a major field of study in addition to the lower and upper-level B.B.A. core courses. For a course to be considered for transfer credit in the student's major, it must have been completed in an AACSB-accredited business program, or a similarly accredited program, at a four-year university. Certain majors within the CoB may have more restrictive policies on transfer credit.

Limit on Business Course Transfers

In order to earn a B.B.A. degree from the JMU CoB, a student must complete at least fifty percent of the business credit hours required for the degree at JMU. Required business credit hours include the B.B.A. core and the courses required for the major. The following B.B.A. core courses do not count toward meeting this requirement: COB 191, ECON 200, and ECON 201.

College of Education

Mark L'Esperance, **Dean**
Bryan S. Zugelder, **Associate Dean for Academic Affairs and Partnerships**
Oris Griffin, **Associate Dean for Diversity, Equity and Inclusion**
Amy D. Thelk, **Associate Dean of Internal Supports and Accountability**
Dara Hall, **Executive Director of Teacher Education and Student Success**
Jacki Nickel, **Executive Director of External Initiatives**
Amy Taylor, **Director of Young Children's Program**

Phone: (540) 568-6572

MSC: 6907

Location: Memorial Hall, Suite 3175

Website: <http://www.jmu.edu/coe>

Academic Units

Department of Early, Elementary and Reading Education
Joi Merritt, Head

Department of Educational Foundations and Exceptionalities
Dannette Allen-Bronaugh, Head

Department of Learning, Technology and Leadership Education
Michele Estes, Interim Head

Department of Middle, Secondary and Mathematics Education
Katie Dredger, Head

Department of Military Science
LTC Michael Davidson, Head

Mission Statement

The mission of the James Madison University College of Education is to prepare educators and leaders to thrive in a complex global environment. The college engages in collaborative, transformative and meaningful work through evidence-based practice to empower all learners, foster continuous growth, and advocate for diversity, equity and justice. The personal and professional development of students is accomplished by emphasizing excellence and continuous innovation in quality undergraduate, graduate and professional programs. The College of Education is distinguished through faculty and student achievements, academic rigor, excellence in teaching, student and faculty interactions and relationships, technological innovations and national recognitions. The college maintains relevance through active and growing interactions with other colleges within the university and with local, state, regional, national and international communities. The college is committed to providing:

- Undergraduate programs that support initial teacher licensure, as well as programs that provide in-depth specialty studies and opportunities for the development of professional knowledge and skills.
- Graduate programs that support initial teacher licensure, advanced preparation and studies that emphasize advanced knowledge in a specialty area and the development of effective leadership and professional skills for addressing the needs of a changing society.

- Continuing professional development and in-service programs in cooperation with public and private schools and agencies, other colleges, institutions and businesses.

The undergraduate and graduate educator preparation programs are accredited by the Council for the Accreditation of Educator Preparation and approved by the Virginia State Board of Education.

The basic philosophy of the college is reflected in these goals:

- To educate individuals for the multiple professions included in the college at both the undergraduate and graduate levels, not merely by transmitting skills and knowledge but by stimulating creativity, developing cognitive abilities and encouraging the testing of hypotheses and reinterpretation of the human experience.
- To encourage a balanced faculty orientation toward teaching, research, scholarship, community service and professionalism that recognizes individual strengths and preferences of the college's faculty.
- To create an environment that fosters an atmosphere of open communication among students, faculty members and community.
- To anticipate societal needs and provide necessary resources for implementing effective off-campus programs now and in the future.

The college offers undergraduate and graduate programs designed for initial teacher licensure, advanced programs for teachers, educational leadership, educational technology, adult education, human resource development, teacher leadership and military science.

Programs and Licensure

The College of Education offers undergraduate majors, minors, and pre-professional education programs across a range of concentrations in both teaching and non-teaching areas. Majors in education lead to a Bachelor of Science that has been specially designed to meet a vital nationwide need for trained and committed teachers. To ensure that you gain the skills needed for this challenging profession, education majors may require additional content, such as a second major, a minor or an area of emphasis. Students must apply after meeting program admission requirements. Please see www.jmu.edu/coe/academics.shtml for details. Your academic adviser will provide you with more information.

Advisement

Students who wish to pursue a teacher education program of study are required to declare the appropriate major and complimentary areas as listed below. Students should apply to the specific teacher licensure program their first semester at JMU or as soon as possible. Consult your adviser and <http://www.jmu.edu/coe/academics.shtml> for details.

Licensure Area	Education Major	Additional Requirements
Art (PreK-12)	Studio Art, Design and Art History	
Dance (PreK-12)	Dance	
Elementary Education (PreK-6)	Elementary Education	
Foreign Language (PreK-12)	Modern Foreign Languages	
Health and Physical Education (PreK-12)	Kinesiology	
Inclusive Early Childhood Education (PreK-3 and Special Education birth-age 5)	Inclusive Early Childhood Education	
Middle Education	Middle Grades Education	One or two concentration area minors required: Language Arts, Mathematics, Science, Social Studies
Music Education (PreK-12)	Music (concentration in Instrumental or Vocal)	
Secondary Education (6-12)	Secondary Education and Content Major (double major) OR Content Major and Minor in Pre-professional Secondary Education	Content Major options: Biology, Chemistry, Earth Science, English, History, Mathematics, Physics or Political Science
Special Education (K-12)	Special Education (concentration in general or adapted)	Minor chosen from selected areas
Teaching English to Speakers of Other Languages (PreK-12)	Teaching English to Speakers of Other Languages	Minor chosen from selected areas
Theatre Education (PreK-12)	Theatre	

The College of Education offers the following undergraduate minors:

- Educational Media
- Human Resources Development

- Military Leadership Minor
 - Exceptional Education – Non-Teaching
- The following endorsements are also available:

- Algebra I
- Gifted Education

Undergraduate students pursuing licensure to teach by completion of graduate M.A.T. programs should:

- Meet requirements indicated by the respective program prior to submitting an application to The Graduate School.
- Apply for admission to The Graduate School according to program deadlines.
- Complete all pre-professional studies requirements before enrolling in graduate courses in education.
- See the JMU Graduate Catalog for more information on the requirements for the M.A.T. and the M.Ed. degrees and for teacher licensure in the identified areas.

Professional Education Unit

The mission of the James Madison University professional education unit is to prepare caring, knowledgeable, skilled and reflective educators who believe that all students can learn and succeed. Our candidates and faculty are committed to lifelong learning and aspire to meet educational needs in a changing, pluralistic and democratic society. The personal and professional development of candidates is accomplished by emphasizing excellence and continuous innovation in quality undergraduate, graduate and professional programs.

The Professional Education Unit is comprised of all programs across the university designed to lead to licensure or advanced study in education.

These following initial licensure programs are offered at the undergraduate level:

- Art Education
- Dance Education
- Early Childhood Education
- Elementary Education
- Foreign Language
- Inclusive Early Childhood Education
- Middle School Grades Education
- Music Education
- Secondary Education¹
- Special Education K-12: General and/or Adapted Curriculum
- Teaching English to Speakers of Other Languages (TESOL)
- Theatre Education

These initial licensure programs are offered at the graduate level for those having baccalaureate degrees:

- Early Childhood Special Education
- Middle Grades Education
- Physical and Health Education
- Secondary Education¹
- Special Education K-12: Adapted Curriculum
- Special Education K-12: General Curriculum

¹ Secondary education licensure programs include biology, chemistry, earth science, physics, English, mathematics, history and social sciences.

Advanced programs are offered at the graduate level for licensed teachers or other school personnel:

- Educational Leadership
- Educational Technology
- Literacy Education
- Teacher Leadership

Professional Education Coordinating Council

The Professional Education Coordinating Council (PECC) is the official university governing body responsible for the preparation of teachers and other school personnel. PECC membership includes coordinators or representatives of all initial licensure and advanced study programs in education, a representative from the IDLS major, the director of assessment and the directors of the Education Support Center and the Educational Technology and Media Center. The Dean of the College of Education serves ex officio as head of the Professional Education Unit. The Dean of the College of Education, or designee, serves as the chair of PECC. The *Professional Education Handbook* outlines all PECC policies and is found on the Education Support Center homepage at www.jmu.edu/coe/esc

Teacher Education Conceptual Framework

The JMU conceptual framework is a guiding set of principles, beliefs and concepts that provide a basis for designing, implementing, monitoring, assessing and changing programs that prepare teachers and other educators who work closely with children and others in school settings. We use the following standards of our profession as our guide:

- CAEP (Council for the Accreditation of Teacher Preparation) Standards
- InTASC (Interstate Teacher Assessment and Support Consortium) Standards
- Professional Association and Professional Accreditation Standards
- Virginia Performance Standards
- Educational Justice

Education Support Center

Dara Hall, **Executive Director**

Website: <http://www.jmu.edu/coe/esc>

The Education Support Center (ESC) assists students with their pursuit of a teaching license:

- monitors admission to, and retention in, the professional education program;
- provides advising support;
- coordinates field experiences for all programs;
- approves applications for Virginia Licensure; and
- serves as the center for information about professional education programs.

Information and application materials for admission to teacher education, appeals, registration and preparation for entry assessments, student teaching and licensure are available on the ESC website. Also provided is information regarding costs associated with teacher education programs.

Admission to Teacher Education

Candidates who want to pursue a course of study leading to the initial Virginia teaching license must be admitted to the teacher education program.

Admission is a prerequisite to most education courses; candidates not admitted to teacher education will be blocked from registering for those courses.

Admission Criteria

Requirements	Initial Licensure Programs
Declare education program and submit application	X
Two satisfactory professional references and a pre-professional self-assessment	X
Grades of "C" or better in <ul style="list-style-type: none"> • WRTC 103 or equivalent • PSYC 160, PSYC 614 or equivalent • EDUC 200 or equivalent 	X
Entry Assessments – standardized reading, writing and math assessments: Virginia Communications and Literacy Assessment (VCLA) and a sufficient ALEKS math placement score or Praxis Core Mathematics Academic Skills for Educators Tests (or SAT or ACT exemption for the math assessment)	X
Child Abuse Prevention (CAP) certificate	X
Cumulative GPA of 2.5 or higher	X
First Aid/CPR/AED certificate	X
No record of felony conviction or misdemeanors involving children or drugs or founded complaint of child abuse or neglect	X
Purchase and subscription to Tk20	X
Specific program requirements*	X

*Consult the program area coordinator for specific information related to any additional requirements for acceptance into their programs.

Deadline

First year students generally apply to Teacher Education by April 15th of their first year and complete all admission requirements by the following semester.

Transfer, post-baccalaureate and graduate candidates should apply during their first term of enrollment at JMU. Students must complete all requirements for admission into teacher education programs in order to enroll in required education courses. A full schedule of application and admission deadlines can be found on the ESC website.

Students can check the status of their admission to the teacher education program on their Tk20 account.

Field Experiences

Field experiences (including practica and internships) are required for candidates in all programs of the professional education unit. The number and nature of these experiences may differ based on program structure and candidates' individual needs and/or goals. Transportation and other arrangements for the practicum and internship courses/experiences will be the candidate's responsibility.

Student Teaching

Student teaching is required as an integral part of the sequence of professional experiences in all teacher education programs.

Its purpose is to enable pre-service teachers to apply acquired skills, understandings and attitudes in PreK-12 classrooms or comprehensive child development programs. Each individual licensure program determines the length of its particular student teaching experience.

The Education Support Center coordinates the student teaching program with participating school divisions, assigning all candidates to their student teaching sites and assisting in the planning and supervision of their work. Experienced teachers serve as cooperating teachers who coach and mentor the student teachers in their classrooms. University supervisors have the major responsibility for the supervision and evaluation of student teachers. Student teaching is graded on a credit/no-credit (undergraduates) or satisfactory/unsatisfactory (graduates) basis.

Candidates must student teach in the area for which they are seeking licensure or endorsement. A candidate enrolled in multiple teacher licensure programs must complete a student teaching experience in each area.

Student teaching placements are made in accredited Virginia public schools, but may be made within accredited Virginia private schools, programs and agencies.

Most placements are made within approximately one hour's driving distance from campus. Some programs also place students in northern Virginia, Richmond, Tidewater and Roanoke. Other local and non-local placement sites may be assigned in accordance with individual program and/or student needs. All placements are based on availability and efficiency of appropriate supervision. Student teaching is a full-time experience. Permission to take additional course work other than that required by the program will be made only in exceptional cases. Student teachers should not expect to work or participate in excessive extracurricular activities during student teaching. Students with problems and/or special needs must contact the director of the ESC for prior approval.

Opportunities exist for qualified candidates to complete a portion of their student teaching at international locations. Those interested in pursuing this option must meet additional requirements and have permission of their programs at time of application to student teach. Refer to the **ESC website** for additional information.

Student Teaching Criteria

To be approved for student teaching, all candidates must:

- Complete (prior to acceptance) all stated requirements for admission to teacher education.
- Attend a mandatory student teaching information session and apply for student teaching.
- Complete all course work, assessments, certificates, and stated requirements prior to student teaching.
- Be recommended for student teaching by their licensure program.
- Meet any additional admission and retention standards of their academic department or school.
- Submit paperwork to show that the student is free from exposure to communicable tuberculosis.

Professional behaviors are expected of all candidates throughout the program. School divisions routinely require a background check prior to student teaching. Convictions for criminal offenses or charges pending may result in schools refusing to make a placement for practicum or student teaching. There may also be serious consequences when being considered for a license to teach in Virginia and in other states. Therefore, students are required to inform the Education Support Center in writing of any conviction or pending charges for a felony, violation of a criminal drug law, an alcohol beverage control law or law that governs driving while intoxicated. Notification should be made within five calendar days after such charge or conviction.

Application Deadlines

Student teaching applications are accepted during the fall semester for the next academic year. It is the student's responsibility to be aware of all application requirements and deadlines.

Teacher Education Licensure

Candidates should apply for a Virginia teaching license upon completion of a teacher education program; this license is not issued automatically. Virginia licensure requirements include the following assessments:

- Virginia Communication and Literacy Assessment (VCLA) for all licensure areas.
- Praxis Subject Assessments for most licensure areas.
- Reading for Virginia Educators (RVE) for selected programs.

In addition, all candidates shall provide evidence certification of training in emergency first aid, CPR (including hands-on practice) and the use of AED, as well as Dyslexia and Restraint and Seclusion training.

Licensure Criteria

A statement indicating completion of an approved teacher education program will be entered on the candidate's transcript after:

- education requirements have been met, including a cumulative 2.5 GPA for undergraduates and a 3.0 for graduates;
- degree is awarded; and
- scores (sufficient for subject area) on all state mandated assessments are achieved.

Out-of-State Licensure

It is recommended that candidates applying for out-of-state licenses first obtain the Virginia license. Out-of-state licensure requirements and application forms

must be obtained directly from the desired state agencies. Other states may have additional testing and GPA requirements the applicant must meet.

Educational Technology and Media Center

Phone: (540) 568-6302

Website: <http://www.jmu.edu/coe/etmc>

The primary goal of the Educational Technology and Media Center (ETMC) is to support students, faculty and staff in their effective use of technologies for learning. This goal is achieved through access, instruction and promotion of educational technologies available within the center. ETMC houses more than 5,000 items including K-12 textbooks, DVDs and videotapes, software, and a variety of other instructional resources. The center houses the children and youth literature collection of James Madison University totaling more than 15,000 volumes.

Computers throughout the facility allow students to work with computer-assisted instruction, web page creation, word processing, digital images, analog and digital video, page layout, data analysis and the creation of multi-media computer presentations. The growing capabilities in instructional technology are evident in this center where interactive video conferencing, video-streaming and other newly emerging technologies expand the potential for learning in multiple environments. Faculty also have access to mobile carts housing laptops, iPads and other mobile device technologies for use in their instructional practice.

For students desiring licensure in Virginia's schools, ETMC provides opportunities to learn and use many forms of instructional technology. ETMC has a range of production facilities including traditional media, audio and video editing areas, and digital technologies that enable students and faculty to produce a wide variety of instructional materials. College of Education students may also check out digital cameras, camcorders, audio recorders, iPads and laptop computers for their instructional practice.

College of Health and Behavioral Studies

Sharon E. Lovell, **Dean**

Kevin J. Apple, **Associate Dean**

BJ Bryson, **Associate Dean**

Linda Plitt Donaldson, **Associate Dean**

Douglas R. Hochstetler, **Associate Dean**

Phone: (540) 568-2705

MSC: 4101

Location: Health and Behavioral Studies Building, Room 5051

Website: <http://chbs.jmu.edu>

Academic Units

Department of Communication Sciences and Disorders

Ayasakanta Rout, Head

Department of Health Professions

Kirk J. Armstrong, Head

Department of Health Sciences

Catherine Zeman, Head

Department of Kinesiology

Elizabeth Edwards, Interim Head

School of Nursing

Melody Eaton, Head

Department of Psychology

Jessica Salvatore, Head

Department of Social Work

Simon Funge, Head

Mission, Vision and Values

Mission

We engage students, faculty and communities in learning, scholarship and service in health and behavioral studies to inspire responsible contributions to our world.

Vision

CHBS will be a leader in collaborative education, scholarship and practice that drive real world advancements.

Values

We promote and support departments, programs and initiatives that advance a culture of excellence and uphold the following values:

Scholarship & Professional Development

Participate actively in research and continual professional development.

Research refers to systematic examination of phenomena using scientific methods and includes:

- Basic Research—leads to understanding of fundamental questions.
- Applied Research—relates basic research to find solutions to everyday problems.
- Translational Research—relates basic research to professional applications that enhance human health and well-being in a multi-disciplinary environment.

Professional Development includes activities designed to enhance professional knowledge and skills.

Innovation

Pursue creative approaches/trends that strive toward new and effective solutions, while respecting successful traditions and established best practices.

Diversity

Appreciate that salient differences, including intersectionality, among and between constituencies and create opportunities for all individuals to have a voice in CHBS endeavors.

Engaged Learning

Employ teaching and learning strategies within various curricula to foster effective thinking, discernment, discovery and lifelong learning skills.

Integrity

Act in a manner consistent with stated personal, professional, college and university values.

Collaboration

Communicate and recognize commonalities, respect differences, and search cooperatively for possibilities to engage in interprofessional and interdisciplinary work.

Collegiality

Respect that everyone has a role to play in achieving the CHBS vision. This shared purpose can be achieved while valuing each other's contributions.

Community

In and beyond our college, impact-driven interactions feature trust, respect, mutuality, service and associations inclusive of multiple viewpoints.

Majors and Minors

Students may select from a variety of majors, minors, programs and concentrations that are available through the departments in the College of Health and Behavioral Studies. Programs offered include the following:

Majors

Communication Sciences and Disorders major; B.A. degree option
Communication Sciences and Disorders major; B.S. degree option
Dietetics, B.S.

Health Sciences Major; B.S. degree option

Health Services Administration, B.S.

Kinesiology, B.S.

Nursing, B.S.N.

Nursing, R.N. to B.S.N.

General Psychology, B.A.

General Psychology, B.S.

Social Work, B.S.W.

Minors

Chronic Illness Minor

Coaching Education Minor

Family Studies Minor

Non-Profit Studies Minor

Sport Communication Minor

Substance Use Disorder Education Minor

Cross Disciplinary Programs, Outreach Programs, Partnerships, Academic Centers and Institutes

The College of Health and Behavioral Studies places a high value on partnerships with the community. These partnerships and our outreach programs are integral to our academic programs and assist us in meeting our responsibility to participate in efforts to enhance the well-being of our community. We value the impact of experiential activities on the enrichment of student learning. Many of the programs within the college are cross disciplinary in nature, reflecting our commitment and supporting the mission of the college. Further details about these cross disciplinary programs are provided in the minors and Academic Institutes and Centers sections of the catalog and on the CHBS website.

College of Integrated Science and Engineering

Robert A. Kolvoord, **Dean**
Jeffrey D. Tang, **Associate Dean**
M. Afzal Upal, **Associate Dean**

Phone: (540) 568-8841

MSC: 4116

Location: 701 Carrier Drive, Harrisonburg, VA 22807

Website: <http://cise.jmu.edu>

Academic Units

Department of Computer Science
Sharon J. Simmons, Head

Department of Engineering
Adebayo A. Ogundipe, Head

Mission

The College of Integrated Science and Engineering encompasses programs whose common focus is solving problems that impact the world at large through both the application of science and technology and the consideration of the social context in which the problem sits.

Over the past several decades, remarkable developments in science and technology have altered our lives and our society, bringing both great opportunities and challenges. Continued prosperity and societal harmony depend on the integration of scientific knowledge, the creative use of engineering design, technical capabilities in computing and other fields, the application of ethical principles and an understanding and appreciation of cultural commonalities and differences. Consequently, there is a need for individuals who understand the importance of specialization, as well as cross disciplinary connections, and also the integration of knowledge for practical application. These individuals must have the flexibility to be able to operate in an environment of uncertainty and complexity, the drive to seize such opportunities as they arise, and the vision and creativity to create new opportunities as needed. Our faculty is dedicated to producing graduates with a scientific and technical knowledge base and a matching set of interpersonal, organizational and technical skills. To this end, our faculty members not only educate our students, but they also inspire and serve as role models.

The college places importance on carrying out its role within the community of Academic Affairs, working collaboratively with other colleges and supporting division-wide programs and priorities.

Mission Statement

The College of Integrated Science and Engineering, by supporting its constituent academic programs, seeks to build a community of students, faculty and staff who share a common purpose of improving our world through the cultivation of integrated sciences and engineering.

Goals

The goals of the College of Integrated Science and Engineering are:

- To promote a student-centered focus in teaching, scholarship and service that encompasses excellence, collegiality and professionalism.
- To foster, among both faculty and students, life-long professional development, personal growth and commitment to ethical behavior.
- To contribute to the betterment of society at local, regional, national and global levels with a focus on sustainable solutions.
- To prepare students to enter professions of value to our community, through the study of applied science and engineering within a social context, or to undertake advanced study.
- To support a community of faculty that pursues high-quality, innovative and cross disciplinary instruction, scholarship, and service.
- To emphasize innovation.
- To encourage partnerships both within and outside the university.

Academic Programs

Students may select from a variety of majors, minors, programs and concentrations that are available through the departments in the College of Integrated Science and Engineering. Programs offered include the following:

Majors

Biotechnology
Computer Science
Engineering
Geography
Information Technology
Integrated Science and Technology
Intelligence Analysis

Minors

Computer Science
Environmental Humanities
Environmental Information Systems
Environmental Management
Environmental Science
Environmental Studies
Geography
Humanitarian Affairs
Integrated Science and Technology
Materials Science
Robotics
Science, Technology and Society
Telecommunications
Urban and Regional Studies

Cross Disciplinary Programs, Outreach Programs, Partnerships and Academic Centers

The College of Integrated Science and Engineering highly values partnerships with the community. These partnerships and our outreach programs are integral to our academic programs and assist us in fulfilling the responsibility we feel to serve our community. We value the impact of experiential activities on the enrichment of student learning. A listing of CISE centers, outreach programs and partnerships may be found on the CISE website.

Graduate Programs

The College of Integrated Science and Engineering offers the following graduate degrees:

- Computer Science (M.S.)
 - Information Security
 - Digital Forensics – Not currently accepting applications.
- Computer Science – Fifth Year Format (M.S.)
 - Information Security
 - Digital Forensics – Not currently accepting applications.
- Integrated Science and Technology (M.S.) – Not currently accepting applications.

- Integrated Science and Technology: Environmental Management and Sustainability (M.S.) – joint degree program with the University of Malta

College of Science and Mathematics

Samantha Prins, **Dean**

Steven J. Whitmeyer, **Associate Dean for Research and Scholarship**

Mindy Capaldi, **Associate Dean for Faculty Support and Development**

Courtney Hope, **Student Success Coordinator and Inclusive Excellence Director**

Brycelyn M. Boardman, **Assistant Dean**

Phone: (540) 568-3508

MSC: 4114

Location: EnGeo Building Suite 3122-3132, 801 Carrier Drive

Website: <http://www.jmu.edu/csm>

Academic Units

Department of Biology

Kyle Seifert, Head

Department of Chemistry and Biochemistry

Linette M. Watkins, Head

Department of Geology and Environmental Science

Stephen A. Leslie, Head

Department of Mathematics and Statistics

Krishnan "Ravi" Shankar, Head

Department of Physics and Astronomy

W. Christopher Hughes, Head

Mission Statement

The mission of the CSM is to establish a culture of "discovery practice," in which students develop their knowledge, skills and habits of mind by participating in science and mathematics practice. We place undergraduate student learning at the center of a rigorous research-based environment.

Because the most creative discoveries happen when people with different perspectives work together, the college is committed to supporting a diverse community of learners. Our faculty and staff work to ensure that every student enrolled in CSM courses experiences a welcoming and supportive learning environment.

We pursue our mission through educational goals focused on:

- Preparing future scientists and mathematicians
- Advancing science and mathematics literacy of JMU students, the Harrisonburg community and our local schools
- Providing the scientific and mathematical foundations needed for professional careers

Programs

The college offers a variety of academic programs, majors, minors, concentrations, cross disciplinary programs and tracks. Most of these are listed below. For an explanation and contact point of each, visit the college website.

American Chemical Society accredited degree

Applied physics

Astronomy minor

Biochemistry concentration

Biochemistry and molecular biology minor for students not majoring in biotechnology

Biology major and minor

Biophysical chemistry major

Biotechnology major

Chemical education concentration

Chemistry major and minor

Chemistry/business concentration

Climate science minor

Computational analytics minor

Computational and applied mathematics

Computational science concentration

Data analytics minor

Data science concentration

Earth science major

Ecology and environmental biology concentration

Environmental and engineering geology

Environmental management minor

Environmental science minor

Environmental studies minor

Forestry Biology Dual degree (B.S. + M.S.) program

Fundamental physics

Geology major and minor

Materials chemistry concentration

Materials science minor

Mathematics major and minor

Microbiology concentration

Neuroscience concentration

Physics – individual option

Physics major and minor

Pre-Dentistry
Pre-Forensic Studies
Pre-Medicine
Pre-Occupational Therapy
Pre-Optometry
Pre-Pharmacy
Pre-Physical Therapy
Pre-Physician Assistant
Pre-Veterinary medicine
Statistics major with data science concentration and Statistics minor
Teaching Licensure Areas:

Algebra I Add-on endorsement
Secondary Biology
Secondary Chemistry
Secondary Earth sciences
Secondary Mathematics
Secondary Physics

Some of these cross disciplinary programs are listed in the cross disciplinary programs section of the catalog. The college also supports the following resource and service centers, collections, events and outreach programs that enhance teaching, scholarly activity and community relations.

Resource and Service Centers

Astronomy Park

Contact: Sean T. Scully

Phone: (540) 568-4511

Website: <https://www.jmu.edu/planetarium/star-parties.shtml>

Located on the east side of campus near the Physics and Chemistry building is a permanent area for sky observing on campus. There are permanent mounts for two portable 11-inch and two 14-inch, computer-controlled telescopes. This site provides a convenient area for sky observing for introductory astronomy students. Students are able to easily see the moon, planets, nebulae, galaxies, star clusters as well as the sun using the appropriate solar filters. The department is also equipped with CCD cameras, spectrometers and multiple solar filters that provide more advanced students with experience in astrophotography and data collection techniques. The public is invited to attend public star gazes which are held several times each semester

Center for Computational Mathematics and Modeling

Contact: Roger Thelwell

Phone: (540) 568-5103

This cross disciplinary institute for scientific computing houses state-of-the-art graphics workstations and a 16 PII node Beowulf computer system. The Beowulf computer system is a parallel computing environment that can be used on large-scale problems. Faculty and students will have access to this "super computer" from the center and from their offices. The center also operates an Immersive 360o Visualization System. The center uses mathematics both to simulate real-world phenomena and to generate visual data.

Faculty members from the sciences, economics and business disciplines interact with mathematicians to model problems that they are researching with undergraduate students.

Center for Engineering Geoscience and Geohazards (CEGGA)

Contact: Yonathan Admassu

Phone: (540) 568-5016

The Center for Engineering Geoscience and Geohazards in Appalachia (CEGGA) is established to provide a collaborative platform to exchange ideas and best practices through its annual forum. CEGGA will also solicit research funding for geohazard related research affecting the Appalachian region.

Center for Materials Science

Contact: Brycelyn Boardman

Phone: (540) 568-8811

The educational mission of the Center for Materials Science is to develop and maintain an innovative interdisciplinary and multidisciplinary undergraduate program in materials science that will increase the maturation of students, their research experience and their employment opportunities. The mission includes the integration of undergraduate education with basic and applied research in materials science.

Faculty in the Center for Materials Science have expertise in a wide variety of areas including inorganic and organic synthesis, microfabrication, nanotechnology, thin film growth and surface modification, materials characterization, and modeling and simulation of complex systems. The facilities include a class 10000 clean room, electron beam lithography, and many types of microscopy and other analytical techniques.

Collaborative work is welcome and can include consultation with faculty, assignment of student projects or simply access to facilities.

Department of Chemistry & Biochemistry LC/MS Facility

Contact: Christine A. Hughey

Phone: (540) 568-6633

Website: <https://www.jmu.edu/chemistry/LCMS.shtml>

The JMU Mass Spectrometry Research & Teaching facility, housed within the Department of Chemistry and Biochemistry, was established in 2010 with two Major Research Instrumentation (MRI) grants from the National Science Foundation.

The mass spectrometry facility houses four LC/MS instruments, one DART TOF and one GC/MS. The LC/MS instruments include: an Agilent 6460 triple quadrupole (QQQ) mass spectrometer coupled to two Rapid Resolution LC pumps and a diode array detector, an Agilent 6224 time of flight (TOF) mass spectrometer coupled to an Infinity UHPLC pump, and Agilent 6530 and 6546 quadrupole time of flight (q-TOF) mass spectrometers each coupled to Infinity UHPLC pumps with DAD detectors. All four LC/MS instruments are equipped with an electrospray source. The time of flight instruments afford the high mass accuracy and high mass resolving power necessary for identification of unknowns in complex mixtures. The MS/MS capability of the q-TOFs afford additional structural information. The sensitivity of the QQQ makes this instrument ideal for targeted small molecule quantitation. The DART TOF is used for the direct analysis of analytes from solid or liquid samples. The quadrupole GC/MS is used for separation, characterization and quantitation of volatile compounds. Collectively, these instruments provide a robust platform for the qualitative and quantitative analysis of both large and small molecules.

Electron Microscopy Center

Contact: Xiaofeng "Harry" Hu

Phone: (540) 568-8115

The Electron Microscopy Center is a multi-user shared facility serving the entire university community for teaching and research. The center also offers demonstrations, trainings and imaging services to other schools, specialized educational programs and local industries. It houses two scanning electron microscopes, Zeiss Sigma 300 VP and LEO 1430 VP, and sample preparation equipment as metal sputter coater, carbon coater and critical point dryer.

JMU Aeroacoustics Lab

Contact: Caroline Lubert

Phone: (540) 568-2922

Email: lubertcp@jmu.edu

Website: <https://www.jmu.edu/mathstat/undergrad-research/aeroacoustics-lab.shtml>

JMU's Aeroacoustics Lab is a research lab centered around a purpose-built 2m x 5m x 5m Anechoic Chamber. This soundproof room is used to conduct simultaneous acoustical (4 B&K microphones at different angles to the test section) and optical (a Schlieren system of mirrors and lenses) measurements. The lab offers research experiences to a large number of students in the field of aeroacoustics – jet noise modeling. The specific application of current interest within the lab is rocket launch noise. This project is carried out in conjunction with two Virginia partners, NASA Wallops Flight Facility (WFF) and Northrop Grumman Innovation Systems (NGIS).

JMU Center for Genome and Metagenome Studies

Contact: Karen Barnard-Kubow

Phone: (540) 568-6225

Website: <http://www.jmu.edu/genomics>

The mission of JMU Center for Genome and Metagenome Studies (CGEMS) is to support innovative research and training in the methods and principles of genomics, metagenomics and bioinformatics in order to provide an exemplary learning experience for undergraduate and graduate students. CGEMS houses Next Generation DNA sequencers (NGS) and the computing infrastructure for analysis and storage of the sequence data that they generate, including the Illumina MiniSeq short read and the Oxford Nanopore MinION long read sequencers. The center supports and fosters collaboration among researchers and students in a variety of departments and colleges. CGEMS also sponsors seminars and provides outreach to other higher education institutions in Virginia as well as area schools.

JMU Greenhouse

Contact: Heather P. Griscom

Phone: (540) 568-5525

The biology department's greenhouse is organized into a head house section and several compartments that can be controlled individually for experimental studies. Each compartment has independent temperature and lighting controls and an automatic watering system. The greenhouse currently contains a collection of plant species used for teaching classes and conducting research, including a population of African violets from an endangered species native to Kenya.

JMU Herbarium

Contact: Conley K. McMullen

Phone: (540) 568-3805

Website: <http://csmbio.csm.jmu.edu/biology/mcmulck/Herbarium.htm>

The JMU Herbarium, located in Bioscience 1003, comprises 20 full-size and 14 half-size herbarium cabinets that house approximately 18,000 pressed and dried plant specimens. The herbarium is recognized in Index Herbariorum, an international listing of the world's significant herbaria and carries the acronym JMUH. JMUH presently houses a teaching and research collection of bryophytes, ferns and fern allies, gymnosperms and angiosperms, as well as a small collection of algae. These collections are predominantly from Virginia (particularly the Shenandoah Valley) and West Virginia, although specimens from Hawaii, Poland and the Galápagos Islands are also included. The earliest specimens date from 1825. Also present in the herbarium are a full-size drying oven, upright specimen freezer, three swing-arm dissecting microscopes, 20+ complete plant presses and collecting tools. In addition, JMUH houses a small library that contains a variety of Floras (including Flora of North America), botany textbooks, identification keys and journals. The latter include the American Fern Journal, Botanical Journal of the Linnean Society, Castanea, Rhodora and Systematic Botany).

JMU JEM Lab

Contact: Laura Taalman

Phone: (540) 568-3355

Email: taalmana@jmu.edu

Website: <https://www.jmu.edu/mathstat/jemlab/index.shtml>

Originally known as the JMU Math MakerLab, the JEM Lab offers opportunities for experimental and exploratory research in mathematics to students who are early in their undergraduate careers. Students who work in the JEM Lab leverage a wide variety of computational tools and resources to explore mathematics. JEM Lab students are usually first-year or second-year undergraduates, with no previous experience with any mathematical or design software packages, and that is how we like it! In 2021 the JEM Lab became a member of Geometry Labs United, a consortium of technology research labs at national and international research universities. The JEM Lab is proud to be the first and only Geometry Lab at a primarily undergraduate institution.

JMU Meteorite Collection

Contact: Geary Albright

Phone: (540) 540-568-2659

Website: <https://www.jmu.edu/physics/meteorite-collection.shtml>

The James Madison University Meteorite Collection is a growing collection of the many sorts of meteorites to strike the Earth, and is located in Miller Hall in the lobby of the John C. Wells Planetarium. The display is open to the public year-round during university business hours, and after hours by special arrangement.

JMU Regional Undergraduate Laser Facility

Contact: Oleksandr Kokhan

Phone: (540) 568-1656

Website: www.jmu.edu/chemistry/lasers.shtml

The JMU Regional Undergraduate Laser Facility supports research and education in advanced optical spectroscopy. The facility houses a large number

of continuous-wave and pulsed lasers together with a rich collection of detectors, digitizers and other equipment for characterization and handling of laser beams.

John C. Wells Planetarium

Contact: Geary E. Albright

Phone: (540) 568-2659

Website: www.jmu.edu/planetarium

Located in Miller Hall, the planetarium serves as a teaching laboratory for both the undergraduates and the local community alike. The facility is used as a resource for introductory astronomy classes and well as welcoming school groups from the region. Several public planetarium shows are offered every month that vary with the seasons. The planetarium is equipped with a GOTO-Chronos/Digistar-7 hybrid planetarium system that offers full dome video as well as exceptionally clear and accurate simulations of the night sky.

Madison Accelerator Laboratory (MAL)

Contact: Adriana Banu, Scientific Program Coordinator

Phone: (540) 568-8940

Contact: Tilda Pendleton, Laboratory Manager

Phone: (540) 568-2650

Website: <https://sites.lib.jmu.edu/mal>

The Madison Accelerator Laboratory (MAL) is a multidisciplinary research user facility available for JMU faculty and students as well as for higher education institutions in Virginia and beyond. The facility features a converted medical electron linear accelerator (linac) with electron beam energies from 5-14 MeV and X-ray beam with endpoint energies from 6-15 MeV. The linac can be used for a variety of applications from basic nuclear physics and radiation effects testing to probing materials via Photon Activation Analysis, a non-destructive and versatile tool that provides high sensitivity for elemental chemical identification, particularly useful for irreplaceable or rare samples. In addition, MAL features a 140 kV X-ray imager with 3-D imaging capabilities allowing non-destructive internal imaging of materials, biological samples and archaeological/historical artifacts.

Microscopy Facility

Contact: Kristopher E. Kubow

Phone: (540) 568-4521

Website: <http://www.jmu.edu/microscopy>

The Biology Department's Microscopy Facility is equipped with several light and fluorescence microscopes, including a Nikon C1 Confocal Laser Scanning Microscope, enabling time lapse imaging, 3-D image reconstruction and fluorescence imaging. The facility has a dedicated staff member who can provide training on the equipment and help faculty and students with any microscopy aspects of their research projects.

Mineral Museum

Contact: Elizabeth Johnson and Eric Pyle

Phone: (540) 568-6130

Website: <https://www.jmu.edu/mineralmuseum/>

Housed with the Department of Geology, the JMU Mineral Museum contains more than 700 exceptionally beautiful display specimens that provide mineralogy students with outstanding visual examples of some of the finest crystals from around the world. Each year, numerous educational groups, mineralogical societies and individual collectors visit the collection.

Science and Mathematics Learning Center

Contact: Laura Miller, Director of Science and Mathematics Learning Center

Phone: (540) 568-6203

Website: <http://www.jmu.edu/smlc>

The College of Science and Mathematics has established a Learning Center for Science and Mathematics. The center, which is a part of the JMU Student Success Center, provides extra help with math and science for students in general education and beginning science courses. The center is staffed by five full-time coordinators and carefully selected upper-level science and mathematics majors.

Shenandoah Valley Regional NMR Facility

Contact: Jun Yin

Phone: (540) 568-3683

Website: <http://www.jmu.edu/chemistry/NMR.shtml>

The Shenandoah Valley Regional NMR Facility was established with grants from The National Science Foundation (9650132) and The Merck Foundation with matching funds provided by James Madison University, Eastern Mennonite University and Bridgewater College.

The NMR Facility is comprised of three NMR spectrometers: 300, 400 and 600. The 600 features Bruker's state of art AVANCE NEO Console. Both 300 and 400 are AVANCE III HD system, the 300 is equipped with a Sample Case that supports 24 sample for sequential or batch automation.

These instruments are housed at JMU and can be accessed remotely by the Regional NMR Consortium. The group is composed of chemists from Bridgewater College, Eastern Mennonite University, James Madison University, Mary Baldwin University and the University of Virginia.

Shenandoah Valley Regional Science Fair

Contact: Corey Cleland

Phone: (434) 284-0543

The Shenandoah Valley Regional Science Fair has been administered by the JMU science faculty for over four decades. The science fair is a competition open to all students in grades 6-12 who live in Virginia's Shenandoah Valley.

Statistical Consulting Center

Contact: Hasan Hamdan

Email: statconsult@jmu.edu

Through this office, statistics faculty members and students provide JMU and the local community with assistance in the design and analysis of statistical surveys and experiments. Students obtain practical experience and an appreciation for the impact of statistical methods on today's society.

Wriggling Organisms and Modeling (WOrM) Lab

Contact: Eva Strawbridge

Phone: (540) 568-6938
Email: strawbem@jmu.edu
Website: <https://www.jmu.edu/mathstat/undergrad-research/worm-lab.shtml>

The WORM Lab is an experimental space for research and undergraduate education at the interface of mathematics and biology. The primary focus of our

research group is the numerical, analytical, and experimental study of the locomotion of the 1mm long worm *C. elegans*. The lab currently consists of a wet lab and a microscope dark room which houses an in-house built worm-tracking microscope as well as a Brookfield DV-III Rheometer. Research students in the WORM Lab conduct independent theoretical and experimental investigations into the question of the biomechanics of locomotion.

College of Visual and Performing Arts

Rubén Graciani, **Dean**
Wren Stevens, **Associate Dean**

Phone: (540) 568-7131
MSC: 2107
Location: Shirley Hanson Roberts Center
Website: <http://www.jmu.edu/arts/>

Academic Units

School of Art, Design and Art History
Director: MiKyong Lee

School of Music
Director: John Allemeier

School of Theatre and Dance
Director: Peter Zazzali

Mission Statement

The College of Visual and Performing Arts empowers our communities to collaborate, envision and achieve their creative and professional aspirations. We explore the arts and design as a vehicle for cultural advancement, transformation and engagement.

Goals

The programs in the college are committed to achieving the following common objectives:

- To prepare students to be articulate, effective and inspiring performers, educators, creators, scholars and professionals in the arts.
- To attain recognition and leadership in the arts at the regional, national and global levels.
- To enhance, develop and sustain undergraduate and graduate programs of distinction.
- To support cultural, aesthetic and intellectual diversity, and to foster interdisciplinary exchange.
- To offer students instruction and learning experiences that incorporate the latest technology, research and practices.
- To engage the surrounding community as an active partner in promoting and experiencing the arts.

Majors and Minors

CVPA offers majors and minors from the following Schools:

Art, Design and Art History

Music
Theatre and Dance

Resources and Events

Forbes Center for the Performing Arts

Executive Director: Regan Byrne
Phone: (540) 568-7000
Website: <https://www.jmu.edu/forbescenter>

Comprised of the Dorothy Thomasson Estes Center for Theatre and Dance and the Shirley Hanson Roberts Center for Music Performance, the Forbes Center houses five state-of-the-art performance venues: the Mainstage Theatre (450 seats), the Concert Hall (600 seats), the Recital Hall (196 seats), the Studio Theatre (200 seats) and the Earlynn J. Miller Dance Theatre (200 seats).

The center is home to the Masterpiece Season, a variety of cultural events for JMU and the entire community. The schools of Art, Design and Art History; Music; and Theatre and Dance all take an active role in this series. The season also includes the Encore Series and Family Series featuring visiting artists such as Julian Sands, Liz Lerman Dance Exchange, Béla Fleck, Denyce Graves, Jefferson Pinder and Alex Bay.

Galleries

Director: Beth Hinderliter
Phone: (540) 568-6407
Website: www.jmu.edu/artandarthistory/galleries/galleries-overview.shtml

artWorks Gallery

artWorks is JMU's student-run gallery, exhibiting work by undergraduate and graduate students. The gallery features moveable walls; hardwood floors; large windows; and a high, open ceiling. Exhibits change, on average, every four weeks. The gallery is located a short walk from Duke Hall on the second floor of 131 Grace Street. The artWorks Gallery is a curricular component of the School of Art, Design and Art History.

Duke Hall Gallery of Fine Art

Duke Hall Gallery of Fine Art fosters creative and collaborative learning via active engagement with ideas, artworks and exhibitions. The gallery is a platform for critically acclaimed exhibitions, vibrant programming and publications that advance scholarship. As a teaching space, the gallery offers internships each semester and is a vital part of many School of Art, Design and Art History classes, including museum studies.

New Image Gallery

New Image Gallery is a university gallery featuring contemporary photography and new media by regional, national and international artists. New Image Gallery is located on the second floor of 131 Grace Street, JMU, Harrisonburg, VA. New Image Gallery is a curricular component of the School of Art, Design and Art History.

Programs

Office of Creative Propulsion

Phone: (540) 568-5656

Website: <https://www.jmu.edu/arts/ocp/index.shtml>

The Office of Creative Propulsion is an entity within JMU's College of Visual and Performing Arts. CVPA's ongoing work is animated by a belief that the arts - by themselves and as contributions to multidisciplinary efforts - generate personal and social meaning, inspiration and change. Our communities are ripe with possibilities for artists, designers, educators and scholars who can leverage their experiences and education to reimagine and disrupt traditional practices; stretch and break artistic boundaries; collaborate on multidisciplinary

teams; synthesize data from the world around them to identify problems and opportunities; and act boldly, justly and inclusively to create their own unique path. Through facilitating integrative courses, multidisciplinary collaborations, community engagement and participatory arts experiences, OCP supports students and faculty in ideating, launching, and refining arts-based efforts that promote more equitable and inclusive opportunities for meaningful arts engagement.

The Office of Creative Propulsion includes:

Madison Art Collection

Director: Virginia Soenksen

Phone: (540) 568-2661

Website: <http://www.jmu.edu/madisonart/>

The Madison Art Collection (MAC) is an encyclopedic collection of over 35,000 works of art and artifacts from a wide range of cultures. As the only art museum in the Shenandoah Valley, MAC provides unique opportunities for students, faculty and the surrounding community to access art of the world. The Lisanby Museum, the public gallery space, showcases two thematic exhibitions a year featuring objects from the permanent collection, and is open and free to all. Internships offer undergraduate students the opportunity to develop practical skills in a museum environment, including curation, collections management and exhibition design. Students and scholars interested in accessing objects in the Madison Art Collection should contact the director. MAC facilities are located on the lower level of the Festival Conference and Student Center.

Honors College

Bethany Blackstone, **Dean**
Fawn-Amber Montoya, **Associate Dean**
Félix Wang, **Assistant Dean**

Phone: (540) 568-6953

Location: Hillcrest House

Website: <http://www.jmu.edu/honors>

Mission

The Honors College seeks to develop a diverse community of inquisitive and aspirational learners from all parts of campus through distinctive and challenging educational experiences. Under the guidance of recognized teacher-scholars, this program offers students the opportunity to cultivate the habits of critical thinking, independent analysis and creative expression through

classes and independent study. The program offers a setting in which students who share a similar enthusiasm for learning are brought together in intellectual fellowship and provides public recognition for superior academic achievement.

Programs

Honors Interdisciplinary Studies Minor

Honors Project for Non-minor Students

School of Professional & Continuing Education

Nicholas Swartz, **Interim Dean**
Carol Fleming, **Assistant Dean**
Sarah MacDonald, **Associate Dean**

Phone: (540) 568-4253

Location: Ice House, 127 W. Bruce Street, MSC 6906

Website: <https://www.jmu.edu/pce/>

School of Professional & Continuing Education (SPCE), a unit within Academic Affairs, confers three degrees through the Adult Degree Program (BA, BS, BIS), partners with academic units across campus to facilitate a range of graduate certificates, master's degrees and courses, youth programs, a lifelong learning institute for seniors, and professional development programs. SPCE also facilitates a number of initiatives that support university-wide goals and objectives, including economic and community development and community engagement.

SPCE's mission is to respond to individual, business and community needs through transformative educational programs and experiences. These experiences are categorized into four main functional areas including: Graduate & Undergraduate Studies, Outreach & Engagement, Economic & Community Development, and Professional Development. In addition to these functional areas, SPCE is home to two sponsored programs (Shenandoah Valley Partnership, and Shenandoah Valley Technology Council).

Non-degree Seeking Student Admission

The non-degree seeking student classification includes adult non-degree students, high school non-degree students and teacher licensure students. Individuals seeking enrollment as a non-degree seeking student must complete the "Non-degree Seeking Student Application." Virginia residents must also complete the "Checklist and Application for Virginia In-state Tuition Rates." A non-refundable \$20 application fee must accompany the application. Non-degree seeking students must submit the application and processing fee each semester they enroll in courses.

Non-degree seeking students can enroll and register for up to 11 hours of credit per semester. If additional credits are needed, students should contact SPCE. Course prerequisites may apply. Courses at the 500 or 600 level and above require approval by the appropriate department head. Non-degree

seeking students can complete the non-degree student application and the in-state form by going to <https://www.jmu.edu/pce/> and clicking "Apply."

Students should register online during the dates identified for non-degree seeking students following the instructions at <https://www.jmu.edu/pce/> "For Students" then "Registration Dates and Deadlines." Walk-in registration and course adjustments are permitted for non-degree seeking students; contact the Registrar's Office.

The courses taken in the non-degree seeking student category carry university credit, and they may be transferred into a degree program, once admitted, at the discretion of the program. JMU reserves the right to deny admission to non-degree seeking students; admission as a non-degree seeking student does not guarantee admission to a degree program at the university.

Senior Citizen Tuition Waiver

Legal residents of the State of Virginia who have reached 60 years of age before the beginning of an academic term and who have a taxable income that did not exceed \$23,850 for the year proceeding the term may register for and enroll in courses as full-time or part-time students and pay no tuition but will incur a \$20 application fee as well as fees established for the purpose of paying for course materials, such as laboratory fees. Senior citizens who have a taxable income higher than \$23,850 may choose to register to audit courses under the same policy, subject to instructor and department approval. Senior citizens shall be subject to the admissions requirements of the institution and a determination by the institution of its ability to offer the course or courses for which the senior citizen registers. A senior citizen shall only be admitted to a course in which enrollment is sought after all tuition-paying students have been accommodated. A senior citizen tuition waiver form must be submitted to Professional & Continuing Education to determine eligibility according to section 23-38:54 of the Code of Virginia.

Forms can be found on the SPCE website.

The Graduate School

Linda M. Thomas, **Dean**

Michael Stolloff, **Associate Dean**

Laura Ryman, **Interim Assistant Dean**

Phone: (540) 568-6131

Website: <http://www.jmu.edu/grad>

Location: Madison Hall, Fourth Floor, MSC 6702

The Graduate School coordinates graduate and post-graduate education throughout the university. The JMU Graduate School was established in 1954 when the State Board of Education authorized the university to offer programs leading to the Master of Science in Education degree. There have been over 22,779 graduate degrees awarded through 2022, and enrollment growth and

ongoing development of graduate programs of distinction are key strategic initiatives of the university.

Graduate Education at James Madison University serves the public good by providing graduate students with high-quality academic experiences and professional development through its diverse, collaborative, and engaged community.

The Graduate School at James Madison University is a leading institution for graduate study that is recognized for innovative advanced degree programs, distinguished faculty, collaborative student-centered research and applied learning. The Graduate School is responsible for administering over 70 graduate programs offering certificates, master's, educational specialist and doctoral degrees across seven academic colleges. Annually, more than 2,000 students from all areas of the world enroll and pursue post-baccalaureate studies at JMU.

The Graduate School is authorized to offer graduate programs leading to master's, Educational Specialist, Doctor of Audiology, Doctor of Philosophy, Doctor of Psychology, Doctor of Musical Arts and Doctor of Nursing Practice degrees. Many graduate programs also offer concentration areas. For a listing of programs including concentrations, emphasis areas and degrees offered by The Graduate School, refer to the Graduate Catalog or the **graduate school website**.

University Studies

Fletcher Linder, **Dean**
Email: lindergf@jmu.edu
Phone: (540) 568-5270

Audrey Burnett, **Associate Dean**
Email: burnetaj@jmu.edu
Phone: (540) 568-8950

Scott Paulson, **Associate Dean**
Email: paulsosa@jmu.edu
Phone: (540) 568-4567

University Studies is the Dean's office for Exploratory students, Interdisciplinary Liberal Studies (IdLS), and Independent Scholars. It is also the academic unit supporting the Center for Assessment and Research Studies, the International Study Center: Study Group Program, Ethical Reasoning in Action, Online

Virginia Network, and some elective courses. The Associate Provost for Online Strategy serves as the Dean of University Studies. University Studies is located in Gabbin Hall.

Academic Departments

School of Accounting

Alexander L. Gabbin, **Director**
Phone: (540) 568-3071
Email: gabbinal@jmu.edu
Location: Zane Showker Hall, Room 3126
Website: <http://www.jmu.edu/cob/accounting>

Professors

C. Bailey, L. Betancourt, P. Copley, A. Gabbin, D. Hayes

Associate Professors

J. Briggs, A. Duxbury, J. Irving, R. Richardson, I. Scott, N. Wright

Assistant Professors

R. Moore, M. Reidenbach

Senior Lecturers

E. Shifflett

Lecturers

E. Browning, H. Derstine, S. Ferguson, L. Kratz

Mission Statement

The JMU School of Accounting is a learning community that is assertively inclusive and committed to preparing students to serve the public interest as principled and engaged professionals who are able to apply accounting and business knowledge for the betterment of individuals, organizations and society.

The school also offers a Master of Science in accounting. Its mission is to prepare students for success in the accounting profession by strengthening the students' technical expertise, enhancing their understanding of professional responsibility and improving their business skills necessary to compete in today's complex and ever-changing business environment.

Goals

The accounting faculty has identified strategic and tactical goals in three major areas: learning objectives for students, intellectual contributions for faculty and service to our profession and the community.

Learning Environment Objectives

We engage in the scholarship of teaching to prepare students for professional accounting careers in public accounting, industry or the public sector. We provide a learning environment that encourages a commitment to lifelong learning and develops a diverse set of skills in students, including technical

competence, information technology proficiency, critical thinking, teamwork and communication.

Intellectual Contributions Objectives

We engage in the scholarships of discovery, application of knowledge and instructional development to advance knowledge in the field of accounting, to improve business practice, to encourage and support innovative teaching methods and curricula and to foster the intellectual and professional growth of our faculty.

Service Objectives

We serve our school, college, university, accounting profession and business, and academic communities through active participation and leadership in academic, professional and business organizations.

Career Opportunities

The programs of study offered by the accounting program provide an educational experience intended to prepare students for a variety of careers in the accounting, financial, auditing, consulting and information systems fields. Some of the job titles held by graduates of our program include the following:

- Audit Partner
- Business Analyst
- Business Consultant
- Chief Financial Officer
- Comptroller
- Computer Systems Consultant
- Controller
- Cost Accountant
- Cost Analyst
- Division Controller
- Forensic Accountant
- Fraud Examiner
- Information Systems Coordinator
- Internal Auditor
- Systems Consultant
- Tax Adviser
- Tax Partner

Our graduates find employment with all of the "Big Four" international public accounting firms, dozens of national, regional and local public accounting firms, government agencies and major international companies. Many of our graduates work for business consulting firms. The field of accounting has one of the highest demands for new graduates of any area in today's market.

Co-curricular Activities and Organizations

The Financial Professionals Club (FPC) is an organization open to all aspiring or current JMU business majors. Through professional development, community service, and social events, the FPC provides opportunities for students to (i) learn about careers in the financial information professions, (ii) interact with prospective employers, and (iii) serve through leadership positions. The FPC hosts many joint events with the Beta Alpha Psi honor society.

Beta Alpha Psi is the honors organization for accounting, finance, quantitative finance and computer information systems majors.

Programs of Study

The School of Accounting offers both an undergraduate and graduate program. The undergraduate degree consists of the four-year major in accounting, leading to the Bachelor of Business Administration (B.B.A.) degree. During their junior year, students may choose to meet with their adviser to discuss applying for the Master of Science in Accounting (M.S.A.) program. For more information on the M.S. in Accounting degree, please refer to the **Graduate Catalog**.

Students who choose to complete the four-year undergraduate program will have the requisite accounting, business and general education to pursue a variety of career opportunities in accounting and business including assurance, consulting, corporate accounting/finance, financial analysis/venture capital, financial planning, non-for-profit/government and tax consulting services.

Students are advised that 150 hours of college education are required to be licensed as a Certified Public Accountant in most states. The M.S.A. program is therefore recommended for those electing a career in public accounting. A student must be admitted to the M.S.A. program in order to enroll in graduate courses. Admission to the M.S.A. program is competitive. M.S.A. program admission requirements are included in the graduate catalog. Students may apply following their junior year and early application for admission is encouraged.

Accounting, B.B.A.

Program Description

The Bachelor of Business Administration degree in accounting requires a minimum of 120 credit hours of undergraduate course work.

Certifications

Many graduates desire to gain certifications in their selected area of specialization. The Certified Public Accountant (CPA) is the best known of these certifications. To obtain a CPA license in Virginia, candidates must meet a 150-hour education requirement, including 24 credits in accounting and 24 in business. The masters in accounting program is highly recommended for those electing a career in public accounting.

In addition to the CPA exam, graduates of our program sit for the Certified Management Accountant (CMA) exam, the Certified Internal Auditor (CIA) exam, the Certified Information Systems Auditor (CISA) exam and others.

Transfer Credit

All upper-division accounting course work (300-499) must be completed at JMU.

Admission and Retention Requirements

College of Business Progression Standards

Any student admitted to JMU can declare any major offered by the College of Business. However, students must make satisfactory progress in order to be formally admitted into the College of Business. Requirements to continue

pursuing a B.B.A. degree, often referred to as progression standards or formal admission, can be found on the College of Business catalog page.

Accounting Major Progression Standards

Accounting majors are required to earn a minimum grade of "B-" in both COB 241 and COB 242.

Students are required to earn a minimum grade of "C-" in ACTG 343. Corporate Financial Reporting I before continuing to ACTG 344. Corporate Financial Reporting II.

No required 300 or 400-level accounting major course may be attempted more than two times. An "attempted course" is one in which a final letter grade, including "W," "WP" and "WF" is recorded on the student's official JMU transcript.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education	41
B.B.A. Core Component (listed below)	45-46
Major requirements (listed below)	24
University electives	9-10
Total	120

Major Requirements

- ACTG 305. Spreadsheet Skills and Data Analysis for Accounting Information **Credits: 3.00**
- ACTG 310. Data Analytics for Accountants **Credits: 3.00**
- ACTG 313. Accounting Information Systems **Credits: 3.00**
- ACTG 343. Corporate Financial Reporting I **Credits: 3.00**
- ACTG 344. Corporate Financial Reporting II **Credits: 3.00**
- ACTG 377. Federal Income Tax Accounting **Credits: 3.00**
- ACTG 410. Auditing and Assurance **Credits: 3.00**

Elective: 3 Credit Hours

Choose one of the following.

- ACTG 413. Cybersecurity and Accounting Information Protection Strategies **Credits: 3.00**
- ACTG 475. Strategic Cost Accounting and Analytics **Credits: 3.00**
- ACTG 491. Advanced Data Analytics and Emerging Technologies in Accounting and Forensics **Credits: 3.00**

Major Requirements Total: 24 Credit Hours

To receive a B.B.A. degree in accounting, students must have a minimum cumulative grade point average of 2.0 in the major. Major courses are those with an ACTG prefix.

B.B.A. Core Component

B.B.A. Lower-Level Core Component

B.B.A. majors must complete all of the B.B.A. core components as part of their degree program. The following courses comprise the B.B.A. Lower-Level Core Component:

- COB 191. Business Analytics I **Credits: 3.00** ¹
- COB 202. Interpersonal Skills **Credits: 3.00**
- COB 204. Computer Information Systems **Credits: 3.00**
- COB 241. Financial Accounting **Credits: 3.00**
- COB 242. Managerial Accounting **Credits: 3.00** ^{4,5}
- COB 291. Business Analytics II **Credits: 3.00** ²
- ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**
- ECON 201. Introduction to Microeconomics **Credits: 3.00**

- MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00** ³
or
MATH 235. Calculus I [C3QR] **Credits: 4.00** ³

B.B.A. Upper-Level Core Component

The following courses comprise the B.B.A. Upper-Level Core Component:

- COB 300A. Integrative Business: Management **Credits: 3.00** ^{5,6}
- COB 300B. Integrative Business: Finance **Credits: 3.00** ^{5,6}
- COB 300C. Integrative Business: Operations **Credits: 3.00** ^{5,6}
- COB 300D. Integrative Business: Marketing **Credits: 3.00** ^{5,6}
- COB 318. Legal and Ethical Environment of Business **Credits: 3.00** ⁷
- COB 487. Strategic Management **Credits: 3.00** ⁸

Footnotes

¹ MATH 220 may be substituted for COB 191.
² COB 191 or equivalent and MATH 205 or equivalent are prerequisites for COB 291.
³ Calculus is required but not used in calculating the B.B.A. core GPA. Students may substitute MATH 231, MATH 233 or ISAT 151 to fulfill the calculus requirement. MATH 235 is preferred for Economics and Finance majors.
⁴ COB 241 must be taken before COB 242.
⁵ COB 242 is a prerequisite for COB 300 but is not used in calculating the B.B.A. core GPA.
⁶ All four COB 300 courses must be taken during the same semester.
⁷ COB 300 is a prerequisite or corequisite for COB 318. COB 318 is a prerequisite for COB 487 and BLAW 497.
⁸ COB 487 must be taken during the senior year.

Recommended Schedule for Majors

First Two Years

Students planning to major in accounting must be accepted into the College of Business. Admission requirements to the College of Business require completion of 9 lower-level B.B.A. core courses. It is expected that the lower-level B.B.A core curriculum will be completed during the first two years of study along with General Education and elective courses. Students will work with an adviser to develop their schedule of courses for the first two years. It is recommended that accounting majors complete ACTG 305 in the spring of their sophomore year.

ACTG 305. Spreadsheet Skills and Data Analysis for Accounting Information **Credits: 3.00**

Third and Fourth Years

Students accepted into the College of Business will begin major courses in their junior year.

Third Year

First Semester

ACTG 310. Data Analytics for Accountants **Credits: 3.00**
COB 300A. Integrative Business: Management **Credits: 3.00**
COB 300B. Integrative Business: Finance **Credits: 3.00**
COB 300C. Integrative Business: Operations **Credits: 3.00**
COB 300D. Integrative Business: Marketing **Credits: 3.00**

Total: 15 Credit Hours

Second Semester

ACTG 343. Corporate Financial Reporting I **Credits: 3.00**

ACTG 377. Federal Income Tax Accounting **Credits: 3.00**
or
ACTG 313. Accounting Information Systems **Credits: 3.00**

COB 318. Legal and Ethical Environment of Business **Credits: 3.00**
General Education or electives **Credits: 9.00**

Total: 15 Credit Hours

Fourth Year

Up to seven hours of core requirements in economics and calculus may also be taken for General Education credit. Students who take the General Education packages and courses recommended by the College of Business will have only 39 credit hours of additional B.B.A. core requirements.

Any 300 level accounting course not completed in the third year
ACTG 313. Accounting Information Systems **Credits: 3.00**
ACTG 377. Federal Income Tax Accounting **Credits: 3.00**
ACTG 344. Corporate Financial Reporting II **Credits: 3.00**
ACTG 410. Auditing and Assurance **Credits: 3.00**
ACTG 475. Strategic Cost Accounting and Analytics **Credits: 3.00**

COB 487. Strategic Management **Credits: 3.00**

Any remaining General Education or electives required for graduation; consult your adviser.

Program Total: 120 Credit Hours

Accounting Minor

A minor in accounting is available to all JMU students with sophomore standing and in academic good standing. The application process is non-competitive. To be considered for admission, students will need to submit an online application. Applications are accepted from 10/1 to 10/18 in the fall and from 3/2 to 3/20 in the spring. Students wishing to continue in the minor beyond COB 241 and COB 242 must earn a minimum grade of "C" in both COB 241 and COB 242.

Required Courses: 6 Credit Hours

COB 241. Financial Accounting **Credits: 3.00**
COB 242. Managerial Accounting **Credits: 3.00**

Electives: 12 Credit Hours

Choose twelve credit hours from accounting courses numbered ACTG 295 or above. **Credits: 12.00**

Total: 18 Credit Hours

School of Art, Design and Art History

MiKyoung Lee, **Director**
Phone: (540) 568-6216/6661
Email: lee28mx@jmu.edu
Location: Duke Hall, Room 1011
Website: <http://www.jmu.edu/art>

Professors

A. Adesanya, S. Brooks, C. Diop, D. Ehrenpreis, J. Erdman, R. Hilliard, L. Katzman, M. Lee, J. McCaslin, D. McCusker, J. Ott, M. Rooker, M. Shanahan, R. Silberman, W. Stevens, G. Stewart, W. Tate, K. Tollefson-Hall, L. Tubach, W. Wightman, S. Zurbrigg

Associate Professors

A. Barnes, D. Hardy, C. Henriques, B. Hinderliter, R. Mertens, K. Phaup, A. Taylor

Assistant Professors

N. Brinen, D. de Wild, D. Krueger, H. Sions, T. Wile, S. Yoo

Visiting Assistant Professors

M. Saunders, A. Smith

Lecturer

R. Tarbell

Mission Statement

We collaborate as creators and scholars to advance diversity and independent thought through rigorous practice and research.

Goals

The School of Art, Design and Art History discerns the following five distinct teaching goals:

- To prepare future professionals with a global perspective.
- To develop and license future leaders in the field of education.
- To enrich the general education of the JMU community.
- To offer professional instruction for students who wish to enrich their education with a second major or minor.
- To present outstanding contemporary exhibition programs.

To meet these goals, the School of Art, Design and Art History offers three degrees, a choice of five majors and select areas of emphasis. PK-12 Licensure is available to every School of Art, Design and Art History major, regardless of their degree track. Minors are offered in select areas. All degrees require a minimum of 120 credit hours. A full description of degree requirements is listed under degree requirements.

Career Opportunities and Marketable Skills

Art students at JMU have the opportunity to prepare for a wide variety of art and art-related career fields. Because the School of Art, Design and Art History educates art students as critical thinkers and creative problem solvers, graduates have an enhanced ability to think independently, respond flexibly, work productively and compete successfully for employment in career fields that value original and thoughtful creativity. Some possible careers include:

Advertising Designer
Architectural Designer
Artist
Art Critic
Art Educator
Art Historian
Ceramicist
Conservator
Gallery Owner
Graphic Designer
Illustrator
Industrial Designer
Jeweler
Multimedia Designer
Museum Curator/Educator
Painter
Photographer
Printmaker
Sculptor
Textile Designer

To discuss specific career options, students should contact the school and make an appointment with a member of the faculty.

Accreditation

Supplementing JMU's general accreditation, all degrees offered by the School of Art, Design and Art History are professionally accredited by the National Association of Schools of Art and Design. In addition, the Art Education program is also accredited by the National Council for Accreditation of Teacher Education (now CAEP).

Cross Disciplinary Minor

Book Arts Minor

Art, Architectural Design Major, B.F.A.

Program Description

Coordinator: Nick Brinen

Phone: (540) 568-7794

Email: brinenng@jmu.edu

The Bachelor of Fine Arts degree in Art with a major in architectural design educates future design leaders. It is an intensive studio-based program focused on rigorous design processes. Architectural design is approached holistically—emphasizing investigations into the nature of materials and objects, space, history and theory, programmatic invention, functional poetics, and collaboration across disciplines. The curriculum instills purpose, craft, technical competencies, and versatile thinking. We are an inclusive program that develops skilled and empathetic architectural designers.

The Architectural Design Program is a pre-professional major that prepares students for graduate studies as well as entry-level positions in a variety of design fields including architecture, interior design, and landscape architecture. Students should be aware that educational requirements for architectural licensing vary from state to state.

The program is enhanced by frequent field trips as well as guest critics and speakers. Vibrant student organizations including a chapter of the National Organization for Minority Architecture students and the American Institute of Architecture Students provide leadership opportunities for students and connections to the profession.

Admission Requirements

Admission to the architectural design major is selective and competitive for a limited number of reserved seats in upper-division (300-400 level) architectural design courses. Declaration of architectural design as a major and completion of lower-division (100-200) prerequisite art courses does not guarantee admission into the program. Admission to upper-division ARCD courses is based on completion of all prerequisite art courses and merit as determined by faculty review of portfolios submitted in satisfaction of the course ARCD 208.

ARCD 208 is a 0 credit, pass/fail course that functions as a prerequisite to enrollment in 300-400 level architectural design courses. ARCD 208 portfolios are reviewed in the sophomore year prior to pre-registration. Students should contact the area coordinator of architectural design to determine the exact time and location for the ARCD 208 portfolio review.

ARCD 200 and ARCD 202 are restricted to Architectural Design students who have passed ART 102, ART 104 and ART 106 only. Students are restricted from

taking any 300–400 level architectural design studio courses until ARCD 208 has been taken and passed. Accepted students who receive a passing grade for ARCD 208 will be able to register for ARCD upper-division courses for the following semester.

Accepted students who receive a passing grade for ARCD 208 are required to furnish a computer that meets or exceeds the recommendations of the program found here: <http://www.jmu.edu/computing/purchase/dept.shtml>.

Students not accepted will have one opportunity to reapply or may choose to continue in another major within the SADAH.

Special Admission Requirements

Architectural Design, Art Studio, Graphic Design and Industrial Design Majors

All prospective freshmen, transfer and change of major students intending to major in architectural design, graphic design or studio art must meet JMU admission requirements as stated in the Undergraduate Catalog. In addition to meeting JMU admission requirements, all students seeking the BFA with a major in architectural design, art studio or graphic design, or the BS with a major in industrial design are required to submit a portfolio to the school's SlideRoom account (<https://jmuart.slideroom.com>). The submission of a portfolio is optional for students seeking the BA and BS with a major in art studio. All students regardless of degree type, who wish to be considered for a scholarship must submit a portfolio to SlideRoom. The submission of a portfolio is seen as evidence of a student's interest and potential for future success in art. The deadline for submitting portfolios to SADAH's SlideRoom site can be found on the School's Portfolio page. There is a \$10 charge for this submission.

Transfer and Change of Major Students

Transfer and change of major students seeking the BFA with a major in architectural design, art studio, or graphic design or the BS with a major in industrial design are required to submit a portfolio and also need to upload unofficial transcripts and a statement of intent to the school's SlideRoom account that explains their educational and artistic goals, articulating the reasons for choosing this area of study.

On-Campus Portfolio Feedback Days and Scholarships

All students who would like to be considered for scholarships are required to attend one of the on-campus or virtual portfolio feedback days. Students will show their original art and participate in a faculty interview. If time-based media examples (video and animation) are included, students will need to bring their own digital device for presentation purposes. Refer to the [SADAH website](#) for the dates of the upcoming portfolio feedback days and for additional portfolio requirements. All scholarship awards are based on merit and vary in amount. Tours of facilities and program information sessions will take place at on-campus events.

Off-Campus Portfolio Feedback Days

The SADAH also offers students the opportunity for faculty critiques on their portfolio, prior to their digital submission and before an on-campus or virtual portfolio scholarship interview. The off-campus portfolio feedback events provide an opportunity for students to meet SADAH's faculty. All prospective first-year, transfer and change of major students are strongly encouraged to

attend a portfolio feedback day, on or off campus, prior to submitting their portfolio.

Architectural Design

Students seeking official acceptance into the architectural design major must enroll in ARCD 208 and submit a portfolio representing work completed in ARCD 200 and ARCD 202. Students not admitted may reapply the following year.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education courses ¹	41
University electives	1
Major requirements (listed below)	78
Total	120

Footnote

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

It is recommended that students interested in pursuing graduate studies in architecture take PHYS 140 and MATH 205 in fulfillment of General Education credits in The Natural World (formerly Cluster Three: The Natural World).

Major Requirements

This major requires 78 credit hours in art, art history and art-related courses; 45 must focus on architectural design.

Required Courses

Foundation Courses: 18 Credit Hours

- ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**
- ART 104. Drawing I (0,6) **Credits: 3.00**
- ART 106. Three-Dimensional Design (0,6) **Credits: 3.00**
- ART 108. Drawing II (0,6) **Credits: 3.00**
- ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**
- ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

Required Concentration Courses: 51 Credit Hours

- ARCD 200. Architect Design Studio I **Credits: 6.00**
- ARCD 202. Architect Design Studio II **Credits: 6.00**
- ARCD 208. Portfolio Review **Credits: 0.00**
- ARCD 220. Digital Processes **Credits: 3.00**
- ARCD 300. Architect Design Studio III **Credits: 6.00**
- ARCD 302. Architect Design Studio IV **Credits: 6.00**
- ARCD 330. Materials and Methods **Credits: 3.00**
- ARCD 370. History of Architecture **Credits: 3.00**
- ARCD 376. Modern Architecture **Credits: 3.00**
- ARCD 400. Architect Design Studio V **Credits: 6.00**

ARCD 402. Architect Design Studio VI **Credits: 6.00**
ARCD 440. Professional Design Practices **Credits: 3.00**
ARCD 496. Internship **Credits: 0.00**

Art, Design and Art History Electives: 9 Credit Hours

Art, design and art history electives may include courses from general fine arts, graphic design, industrial design, art education, architectural design, internships and art history excluding courses taken in the required major, as well as ARTH 490, ARTH 495 and ARTH 499.

Major Requirements Total: 78 Credit Hours

Recommended Schedule for Majors

First Year

General Education **Credits: 12.00**
Art Foundations **Credits: 18.00**

Total: 30 Credit Hours

Second Year

ARCD 200. Architect Design Studio I **Credits: 6.00**
ARCD 202. Architect Design Studio II **Credits: 6.00**
ARCD 220. Digital Processes **Credits: 3.00**
ARCD 208. Portfolio Review **Credits: 0.00**
ARCD 376. Modern Architecture **Credits: 3.00**
General Education **Credits: 12.00**

Total: 30 Credit Hours

Third Year

ARCD 300. Architect Design Studio III **Credits: 6.00**
ARCD 302. Architect Design Studio IV **Credits: 6.00**
ARCD 330. Materials and Methods **Credits: 3.00**
ARCD 370. History of Architecture **Credits: 3.00**
ARCD 440. Professional Design Practices **Credits: 3.00**
ARCD 496. Internship **Credits: 0.00**¹
Art, Design and Art History Elective Courses
General Education **Credits: 12.00**

Total: 33 Credit Hours

Fourth Year

ARCD 400. Architect Design Studio V **Credits: 6.00**
ARCD 402. Architect Design Studio VI **Credits: 6.00**
Art, Design and Art History Elective Courses **Credits: 6.00**
General Education **Credits: 9.00**

Total: 27 Credit Hours

Footnotes

¹ ARCD 496 is typically completed during the summer.

Program Total: 120 Credit Hours

Art, B.A.

Program Description

Coordinator: Greg Stewart
Phone: (540) 568-6816
Email: stewargk@jmu.edu

The Bachelor of Arts degree in Art is designed for students who seek a breadth of knowledge in the visual arts and who have an interest or background in the humanities and foreign language. The art faculty is made up of practicing artists who work closely with the students, and students also work closely with each other as they develop their studio practice. Visiting artists and scholars, workshops, field trips and frequent on-campus exhibitions of professional artwork enhance student engagement with contemporary art. Additionally, students have opportunities to exhibit and present their artwork, assist in running on-campus galleries and art studio labs, and partake in other hands-on art experiences.

Students graduating with a major in art will:

Display technical command of at least one medium and display fluency in a range of media

Effectively analyze and apply two- and three-dimensional design principles and devices

Develop an independent line of creative inquiry that embraces risk-taking and inventive solutions

Knowledgeably critique and contextualize their artwork to cultivate expressive ideas and meaningful content

Demonstrate awareness of contemporary art and art history within a global context

Special Admission Requirements

Architectural Design, Art Studio, Graphic Design and Industrial Design Majors

All prospective freshmen, transfer and change of major students intending to major in architectural design, graphic design or studio art must meet JMU admission requirements as stated in the Undergraduate Catalog. In addition to meeting JMU admission requirements, all students seeking the BFA with a major in architectural design, art studio or graphic design, or the BS with a major in industrial design are required to submit a portfolio to the school's SlideRoom account (<https://jmuart.slideroom.com>). **The submission of a portfolio is optional for students seeking the BA and BS with a major in art studio. All students regardless of degree type, who wish to be considered for a scholarship must submit a portfolio to SlideRoom.** The submission of a portfolio is seen as evidence of a student's interest and potential for future success in art. The deadline for submitting portfolios to SADAH's SlideRoom

site can be found on the School's Portfolio page. There is a \$10 charge for this submission.

Transfer and Change of Major Students

Transfer and change of major students seeking the BFA with a major in architectural design, art studio, or graphic design or the BS with a major in industrial design are required to submit a portfolio and also need to upload unofficial transcripts and a statement of intent to the school's SlideRoom account that explains their educational and artistic goals, articulating the reasons for choosing this area of study.

On-Campus Portfolio Feedback Days and Scholarships

All students who would like to be considered for scholarships are required to attend one of the on-campus or virtual portfolio feedback days. Students will show their original art and participate in a faculty interview. If time-based media examples (video and animation) are included, students will need to bring their own digital device for presentation purposes. Refer to the [SADAH website](#) for the dates of the upcoming portfolio feedback days and for additional portfolio requirements. All scholarship awards are based on merit and vary in amount. Tours of facilities and program information sessions will take place at on-campus events.

Off-Campus Portfolio Feedback Days

The SADAH also offers students the opportunity for faculty critiques on their portfolio, prior to their digital submission and before an on-campus or virtual portfolio scholarship interview. The off-campus portfolio feedback events provide an opportunity for students to meet SADAH's faculty. All prospective first-year, transfer and change of major students are strongly encouraged to attend a portfolio feedback day, on or off campus, prior to submitting their portfolio.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language courses (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
University electives	17-31
Major requirements (listed below)	45
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Language, Literature and Culture's placement test.

Major Requirements

The art major requires a minimum of 45 credit hours in art and art history.

Foundation Courses

ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**

ART 104. Drawing I (0,6) **Credits: 3.00**

ART 106. Three-Dimensional Design (0,6) **Credits: 3.00**

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

3-D Studio Art courses (choose one of the following):

ART 220. Introductory Ceramics: Potter's Wheel (0,9) **Credits: 3.00**

ART 222. Introductory Ceramics: Handbuilding (0,9) **Credits: 3.00**

ART 232. Introduction to Fiber Arts: Structures **Credits: 3.00**
or

ART 234. Introduction to Fiber Arts: Surfaces **Credits: 3.00**

ART 240. Metal and Jewelry (0,9) **Credits: 3.00**

ART 280. Sculpture (0,9) **Credits: 3.00**

Additional Courses

Studio courses (300-400 level) **Credits: 6.00** ¹

Art electives (any level) **Credits: 9.00** ²

General art electives (any level) **Credits: 9.00** ³

Art history elective (300-400 level) **Credits: 3.00** ⁴

Footnotes

¹ The six credits of studio electives (300-400 level) must be taken in a single studio area. Graphic design and architectural design course credits cannot count as a concentration area. Studio credits cannot be double-counted.

² A minimum of nine credit hours of general art electives must consist of studio-based courses with an ART prefix (excluding ART 200, ART 304, ART 305, ART 491, ART 493 and ART 496).

³ The other nine credit hours of general art electives must consist of any courses with the prefix ARCD, ARED, ART, ARTH, GRPH and INDU.

⁴ Excludes ARTH 490, ARTH 495 and ARTH 499.

Major Requirements Total: 45 Credit Hours

Recommended Schedule for Majors

First Year

ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**

ART 104. Drawing I (0,6) **Credits: 3.00**

ART 106. Three-Dimensional Design (0,6) **Credits: 3.00**

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**

Madison Foundations (formerly Cluster One: Skills for the 21st Century) **Credits: 9.00**

General Education courses **Credits: 9.00**

First Year Total: 30 Credit Hours

Second Year

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

Required studio art course **Credits: 3.00**

Foreign language courses (if needed) **Credits: 6.00**

General Education courses **Credits: 12.00**

General art electives (any level) **Credits: 6.00**

Second Year Total: 30 Credit Hours

Third Year

Art history elective (300-400 level) **Credits: 3.00**

General art electives (any level) **Credits: 9.00**

General electives **Credits: 6.00**

B.A. philosophy requirement **Credits: 3.00**

General Education courses **Credits: 9.00**

Third Year Total: 30 Credit Hours

Fourth Year

Studio art courses (300-400 level) **Credits: 6.00**

Art or general electives **Credits: 24.00**

Fourth Total: 30 Credit Hours

Program Total: 120 Credit Hours

Art, B.F.A.

Program Description

Coordinator: Greg Stewart

Phone: (540) 568-6816

Email: stewargk@jmu.edu

The Bachelor of Fine Arts degree in Art offers concentrations in ceramics, fibers, integrated 3D, metals, painting and drawing, photography, printmaking, and sculpture. It is designed for students who aspire to develop a professional art practice as expansively defined in today's world. Students are prepared to produce and exhibit art and to pursue further study at the graduate level.

The art faculty is made up of practicing artists who work closely with the students, and students also work closely with each other as they develop their studio practice. Visiting artists and scholars, workshops, field trips and frequent on-campus exhibitions of professional artwork enhance student engagement with contemporary art. Additionally, students have opportunities to exhibit and present their artwork, to assist in running on-campus galleries and studio art labs and to partake in other hands-on art experiences.

Students graduating with a major in art will:

Display technical command of at least one medium and display fluency in a range of media

Effectively analyze and apply two- and three-dimensional design principles and devices

Develop an independent line of creative inquiry that embraces risk-taking and inventive solutions

Knowledgeably critique and contextualize their artwork to cultivate expressive ideas and meaningful content

Demonstrate awareness of contemporary art and art history within a global context

Special Admission Requirements

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All prospective freshmen, transfer and change of major students intending to major in architectural design, graphic design or studio art must meet JMU admission requirements as stated in the Undergraduate Catalog. In addition to meeting JMU admission requirements, all students seeking the BFA with a major in architectural design, art studio or graphic design, or the BS with a major in industrial design are required to submit a portfolio to the school's SlideRoom account (<https://jmuart.slideroom.com>). The submission of a portfolio is optional for students seeking the BA and BS with a major in art studio. All students regardless of degree type, who wish to be considered for a scholarship must submit a portfolio to SlideRoom. The submission of a portfolio is seen as evidence of a student's interest and potential for future success in art. The deadline for submitting portfolios to SADAH's SlideRoom site can be found on the School's Portfolio page. There is a \$10 charge for this submission.

Transfer and Change of Major Students

Transfer and change of major students seeking the BFA with a major in architectural design, art studio, or graphic design or the BS with a major in industrial design are required to submit a portfolio and also need to upload unofficial transcripts and a statement of intent to the school's SlideRoom account that explains their educational and artistic goals, articulating the reasons for choosing this area of study.

On-Campus Portfolio Feedback Days and Scholarships

All students who would like to be considered for scholarships are required to attend one of the on-campus or virtual portfolio feedback days. Students will show their original art and participate in a faculty interview. If time-based media examples (video and animation) are included, students will need to bring their own digital device for presentation purposes. Refer to the [SADAH website](#) for the dates of the upcoming portfolio feedback days and for additional portfolio requirements. All scholarship awards are based on merit and vary in amount. Tours of facilities and program information sessions will take place at on-campus events.

Off-Campus Portfolio Feedback Days

The SADAH also offers students the opportunity for faculty critiques on their portfolio, prior to their digital submission and before an on-campus or virtual portfolio scholarship interview. The off-campus portfolio feedback events provide an opportunity for students to meet SADAH's faculty. All prospective first-year, transfer and change of major students are strongly encouraged to

attend a portfolio feedback day, on or off campus, prior to submitting their portfolio.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education courses ¹	41
University elective ¹	1
Major requirements (listed below)	78
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.

Major Requirements

The general fine arts concentration requires 78 credit hours in art, art history and art related courses.

Required Art Courses

Foundation Courses

ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**

ART 104. Drawing I (0,6) **Credits: 3.00**

ART 106. Three-Dimensional Design (0,6) **Credits: 3.00**

ART 108. Drawing II (0,6) **Credits: 3.00**

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

Studio courses (choose six of the following): 18 Credit Hours

Courses cannot be double-counted in studio concentration.

ART 220. Introductory Ceramics: Potter's Wheel (0,9) **Credits: 3.00**

or

ART 222. Introductory Ceramics: Handbuilding (0,9) **Credits: 3.00**

ART 230. Introduction to Fiber Processes (0,9) **Credits: 3.00**

or

ART 232. Introduction to Fiber Arts: Structures **Credits: 3.00**

or

ART 234. Introduction to Fiber Arts: Surfaces **Credits: 3.00**

ART 240. Metal and Jewelry (0,9) **Credits: 3.00**

ART 252. Introductory Painting (0,9) **Credits: 3.00**

ART 260. Introductory Photography: Black and White (0,9) **Credits: 3.00**

ART 270. Printmaking: Screenprint (0,9) **Credits: 3.00**

or

ART 272. Printmaking: Relief and Intaglio **Credits: 3.00**

or

ART 274. Printmaking: Lithography (0,9) **Credits: 3.00**

ART 280. Sculpture (0,9) **Credits: 3.00**

Concentrations

Studio Concentration (choose one of the following): 15 Credit Hours

Credits taken to fulfill the studio concentration must be taken in a single studio area.

Ceramics

ART 220. Introductory Ceramics: Potter's Wheel (0,9) **Credits: 3.00**

ART 222. Introductory Ceramics: Handbuilding (0,9) **Credits: 3.00**

ART 320. Intermediate Ceramics: Molds and Casting (0,9) **Credits: 3.00**

ART 322. Intermediate Ceramics: Surface Development (0,9) **Credits: 3.00**

ART 420. Advanced Ceramics: Portfolio Development (0,9) **Credits: 1.00 - 3.00**
(repeatable to 9 credits)

Fibers

ART 230. Introduction to Fiber Processes (0,9) **Credits: 3.00**

ART 232. Introduction to Fiber Arts: Structures **Credits: 3.00**

ART 234. Introduction to Fiber Arts: Surfaces **Credits: 3.00**

ART 330. Intermediate Fiber Processes (0, 9) **Credits: 3.00**

ART 430. Advanced Fiber Processes **Credits: 1.00 - 3.00**

ART 432. Digital Processes in Fibers **Credits: 3.00**

ART 434. Collaboration in Fiber Arts **Credits: 3.00**

ART 436. Woven Structures in Fiber Arts **Credits: 3.00**

ART 438. Iterative Structures in Fiber Arts **Credits: 3.00**

Metals and Jewelry

ART 240. Metal and Jewelry (0,9) **Credits: 3.00**

ART 340. Intermediate Metal and Jewelry (0,9) **Credits: 3.00**

ART 440. Advanced Metal and Jewelry (0,9) **Credits: 1.00 - 3.00**

An additional 6 credits in ART 340 and/or ART 440

Painting and Drawing

ART 252. Introductory Painting (0,9) **Credits: 3.00**

ART 350. Figure Drawing (0,9) **Credits: 3.00**

ART 352. Intermediate Painting **Credits: 3.00**

ART 452. Advanced Painting (0,9) **Credits: 1.00-3.00** (repeat for credit)

Photography

ART 260. Introductory Photography: Black and White (0,9) **Credits: 3.00**

ART 360. Intermediate Photography: Digital (0,9) **Credits: 3.00**

Complete three of the following courses:

ART 362. Intermediate Photography: Experimental Black and White (0,9) **Credits: 3.00**

ART 364. Intermediate Photography: Large Format (0,9) **Credits: 3.00**
 ART 460. Advanced Photography: Alternative Processes (0,9) **Credits: 1.00 - 3.00**
 ART 462. Advanced Photography: The Prehistory of Photography, Magic and Illusion
Credits: 1.00 - 3.00
 ART 464. Advanced Photography: The Photograph as Document **Credits: 3.00**
 ART 466. Advanced Photography: Performance for the Lens **Credits: 3.00**
 ART 468. Advanced Photography: Screen-Based Photo/Video **Credits: 3.00**
 ART 469. Photography: Portfolio Development (0,9) **Credits: 1.00-3.00**

Printmaking

ART 270. Printmaking: Screenprint (0,9) **Credits: 3.00**
 ART 272. Printmaking: Relief and Intaglio **Credits: 3.00**
 ART 274. Printmaking: Lithography (0,9) **Credits: 3.00**
 ART 470. Advanced Printmaking (0,9) **Credits: 1.00 - 3.00** (repeatable to 6 credits)

Sculpture

ART 280. Sculpture (0,9) **Credits: 3.00**
 ART 380. Sculpture: Conceptual Practice (0,9) **Credits: 3.00**
 ART 480. Sculpture: Expanded Field **Credits: 1.00-3.00** (repeatable to 9 credits)

Integrated 3D

The integrated 3D emphasis requires 78 credit hours in art, art history and art related courses.

Foundation Courses: 18 Credit Hours

ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**
 ART 104. Drawing I (0,6) **Credits: 3.00**
 ART 106. Three-Dimensional Design (0,6) **Credits: 3.00**
 ART 108. Drawing II (0,6) **Credits: 3.00**
 ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**
 ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

2D Studio Art courses (choose two): 6 Credit Hours

ART 252. Introductory Painting (0,9) **Credits: 3.00**
 ART 260. Introductory Photography: Black and White (0,9) **Credits: 3.00**
 ART 270. Printmaking: Screenprint (0,9) **Credits: 3.00**
 ART 272. Printmaking: Relief and Intaglio **Credits: 3.00**
 ART 274. Printmaking: Lithography (0,9) **Credits: 3.00**
 ART 350. Figure Drawing (0,9) **Credits: 3.00**

3D Studio Art courses: 24 Credit Hours

Courses cannot be double-counted in studio emphasis.

ART 220. Introductory Ceramics: Potter's Wheel (0,9) **Credits: 3.00**
 or
 ART 222. Introductory Ceramics: Handbuilding (0,9) **Credits: 3.00**
 ART 232. Introduction to Fiber Arts: Structures **Credits: 3.00**
 or
 ART 234. Introduction to Fiber Arts: Surfaces **Credits: 3.00**

ART 240. Metal and Jewelry (0,9) **Credits: 3.00**

ART 280. Sculpture (0,9) **Credits: 3.00**

ART 320. Intermediate Ceramics: Molds and Casting (0,9) **Credits: 3.00**
 or

ART 322. Intermediate Ceramics: Surface Development (0,9) **Credits: 3.00**

ART 330. Intermediate Fiber Processes (0, 9) **Credits: 3.00**

ART 340. Intermediate Metal and Jewelry (0,9) **Credits: 3.00**

ART 380. Sculpture: Conceptual Practice (0,9) **Credits: 3.00**

Studio Emphasis (choose one of the following media): 6 Credit Hours

Credits taken to fulfill the studio emphasis must be taken in a single studio area.

Ceramics

ART 320. Intermediate Ceramics: Molds and Casting (0,9) **Credits: 3.00**
 or

ART 322. Intermediate Ceramics: Surface Development (0,9) **Credits: 3.00**

ART 420. Advanced Ceramics: Portfolio Development (0,9) **Credits: 1.00 - 3.00**
(repeatable up to 9.00 credits)

Fibers

ART 430. Advanced Fiber Processes **Credits: 1.00 - 3.00** *(repeatable up to 9.00 credits)*

ART 432. Digital Processes in Fibers **Credits: 3.00** *(repeatable up to 9.00 credits)*

ART 434. Collaboration in Fiber Arts **Credits: 3.00** *(repeatable up to 9.00 credits)*

ART 436. Woven Structures in Fiber Arts **Credits: 3.00** *(repeatable up to 9.00 credits)*

ART 438. Iterative Structures in Fiber Arts **Credits: 3.00** *(repeatable up to 9.00 credits)*

Metals and Jewelry

ART 440. Advanced Metal and Jewelry (0,9) **Credits: 1.00 - 3.00** *(repeatable up to 9.00 credits)*

Sculpture

ART 480. Sculpture: Expanded Field **Credits: 1.00-3.00** *(repeatable up to 9.00 credits)*

Required Capstone Courses: 6 Credit Hours

ART 495. Capstone Seminar: Three-Dimensional Art **Credits: 3.00** *(offered every spring)*

ART 497. Capstone Studio: Three-Dimensional Art **Credits: 3.00** *(offered fall and spring)*

Art History Electives: 6 Credit Hours

Art history electives (300–400 level) ² **Credits: 6.00**

Additional Courses: 12 Credit Hours

Art and art-related electives ³ **Credits: 12.00**

Footnotes

¹ This course fulfills the College of Visual and Performing Arts writing-intensive requirement for the major.

² Excludes ARTH 490, ARTH 495 and ARTH 499.

³ Studio and art-related electives include courses from graphic design, interior design, art education and internships, but excludes courses taken to fulfill the studio concentration.

Integrated 3D Concentration Total: 78 Credit Hours

Art History electives (300–400 level): 6 Credit Hours

Excludes ARTH 490, ARTH 495 and ARTH 499.

Art and art-related electives: 21 Credit Hours

Art and art-related electives may include courses from graphic design, architectural design, art education independent study, industrial design, internships and study abroad studio courses but excludes courses taken to fulfill the studio concentration.

Major Requirements Total: 78 Credit Hours

Recommended Schedule for Majors

First Year

ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**

ART 104. Drawing I (0,6) **Credits: 3.00**

ART 106. Three-Dimensional Design (0,6) **Credits: 3.00**

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

Madison Foundations (formerly Cluster One: Skills for the 21st Century) 9–12
Credit Hours

General Education: The Human Community courses 3 *Credit Hours*

First Year Total: 30 Credit Hours

Second Year

ART 108. Drawing II (0,6) **Credits: 3.00**

Required two- and three-dimensional studio art electives 9 *Credit Hours*

Studio concentration 6 *Credit Hours*

General Education: The Human Community courses 12 *Credit Hours*

Second Year Total: 30 Credit Hours

Third Year

Art history elective (300–400 level) 3 *Credit Hours*

Required two- and three-dimensional studio art electives 9 *Credit Hours*

Studio concentration 6 *Credit Hours*

General or art electives (any level) 6 *Credit Hours*

General Education: The Human Community courses 6 *Credit Hours*

Third Year Total: 30 Credit Hours

Fourth Year

Art history elective (300–400 level) 3 *Credit Hours*

Studio concentration 6 *Credit Hours*

General or art electives 9 *Credit Hours*

General Education: The Human Community courses 12 *Credit Hours*

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Art, B.S.

Program Description

Coordinator: Greg Stewart

Phone: (540) 568-6816

Email: stewargk@jmu.edu

The Bachelor of Science degree in Art is designed for students who seek a breadth of knowledge in the visual arts and who have an interest or background in math, the natural sciences or the social sciences. The art faculty is made up of practicing artists who work closely with the students, and students also work closely with each other as they develop their studio practice. Visiting artists and scholars, workshops, field trips and frequent on-campus exhibitions of professional artwork enhance student engagement with contemporary art. Additionally, students have opportunities to exhibit and present their artwork, to assist in running on-campus galleries and studio art labs and to partake in other hands-on art experiences.

Students graduating with a major in art will:

Display technical command of at least one medium and display fluency in a range of media

Effectively analyze and apply two- and three-dimensional design principles and devices

Develop an independent line of creative inquiry that embraces risk-taking and inventive solutions

Knowledgeably critique and contextualize their artwork to cultivate expressive ideas and meaningful content

Demonstrate awareness of contemporary art and art history within a global context

Special Admission Requirements

Architectural Design, Art Studio, Graphic Design and Industrial Design Majors

All prospective freshmen, transfer and change of major students intending to major in architectural design, graphic design or studio art must meet JMU admission requirements as stated in the Undergraduate Catalog. In addition to meeting JMU admission requirements, all students seeking the BFA with a major in architectural design, art studio or graphic design, or the BS with a major in industrial design are required to submit a portfolio to the school's SlideRoom account (<https://jmuart.slideroom.com>). **The submission of a portfolio is optional for students seeking the BA and BS with a major in art studio. All students regardless of degree type, who wish to be considered for a scholarship must submit a portfolio to SlideRoom.** The submission of a portfolio is seen as evidence of a student's interest and potential for future success in art. The deadline for submitting portfolios to SADAH's SlideRoom site can be found on the School's Portfolio page. There is a \$10 charge for this submission.

Transfer and Change of Major Students

Transfer and change of major students seeking the BFA with a major in architectural design, art studio, or graphic design or the BS with a major in industrial design are required to submit a portfolio and also need to upload unofficial transcripts and a statement of intent to the school's SlideRoom account that explains their educational and artistic goals, articulating the reasons for choosing this area of study.

On-Campus Portfolio Feedback Days and Scholarships

All students who would like to be considered for scholarships are required to attend one of the on-campus or virtual portfolio feedback days. Students will show their original art and participate in a faculty interview. If time-based media examples (video and animation) are included, students will need to bring their own digital device for presentation purposes. Refer to the [SADAH website](#) for the dates of the upcoming portfolio feedback days and for additional portfolio requirements. All scholarship awards are based on merit and vary in amount. Tours of facilities and program information sessions will take place at on-campus events.

Off-Campus Portfolio Feedback Days

The SADAH also offers students the opportunity for faculty critiques on their portfolio, prior to their digital submission and before an on-campus or virtual portfolio scholarship interview. The off-campus portfolio feedback events provide an opportunity for students to meet SADAH's faculty. All prospective first-year, transfer and change of major students are strongly encouraged to attend a portfolio feedback day, on or off campus, prior to submitting their portfolio.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education requirements ¹	41
Quantitative requirement ²	3
Scientific Literacy requirement ²	3

Degree Requirements	Credit Hours
Major requirements (listed below)	41
University electives	28
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² In addition to course work taken to fulfill General Education requirement.

Major Requirements

The art major requires 45 credit hours in art and art history courses.

Foundation Courses

- ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**
- ART 104. Drawing I (0,6) **Credits: 3.00**
- ART 106. Three-Dimensional Design (0,6) **Credits: 3.00**
- ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**
- ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

3-D Studio Art courses (choose one of the following):
3 Credit Hours

- ART 220. Introductory Ceramics: Potter's Wheel (0,9) **Credits: 3.00**
- ART 222. Introductory Ceramics: Handbuilding (0,9) **Credits: 3.00**
- ART 232. Introduction to Fiber Arts: Structures **Credits: 3.00**
- or
- ART 234. Introduction to Fiber Arts: Surfaces **Credits: 3.00**
- ART 240. Metal and Jewelry (0,9) **Credits: 3.00**
- ART 280. Sculpture (0,9) **Credits: 3.00**

Additional Courses

- Studio electives (300-400 level) *6 Credit Hours* ¹
- Art electives (any level) *9 credits* ²
- General art electives (any level) *9 Credit Hours* ³
- Art history elective (300-400 level) *3 Credit Hours* ⁴

Total: 45 Credit Hours

Footnotes

¹ The six credits of studio electives (300-400 level) must be taken in a single studio area. Graphic design and architectural design course credits cannot count as a concentration area. Studio credits cannot be double-counted.

² A minimum of nine credit hours of general art electives must consist of studio-based courses with an ART prefix (excluding ART 200, ART 304, ART 305, ART 491, ART 493 and ART 496).

³The other nine credit hours of general art electives must consist of any courses with the prefix ARCD, ARED, ART, ARTH, GRPH and INDU.

⁴Excludes ARTH 490, ARTH 495 and ARTH 499.

Recommended Schedule for Majors

First Year

ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**

ART 104. Drawing I (0,6) **Credits: 3.00**

ART 106. Three-Dimensional Design (0,6) **Credits: 3.00**

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**

Madison Foundations (formerly Cluster One: Skills for the 21st Century) **Credits: 9.00 - 12.00**

General Education: The Human Community **Credits: 6.00 - 9.00**

First Year Total: 30 Credit Hours

Second Year

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

Required studio art elective **Credits: 3.00**

Scientific Literacy requirement (*in addition to General Education*) **Credits: 3.00**

General Education course **Credits: 9.00**

General art electives (*any level*) **Credits: 6.00**

General elective **Credits: 3.00**

Second Year Total: 30 Credit Hours

Third Year

Art history elective (*300-400 level*) **Credits: 3.00**

General art electives (*any level*) **Credits: 9.00**

General elective **Credits: 3.00**

Quantitative requirement (*in addition to General Education*) **Credits: 3.00**

General Education courses **Credits: 12.00**

Third Year Total: 30 Credit Hours

Fourth Year

Studio art electives (*300-400 level*) **Credits: 6.00**

General electives **Credits: 9.00 - 12.00**

General Education courses **Credits: 12.00 - 15.00**

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Art, Graphic Design Major, B.F.A.

Program Description

Coordinator: Dawn McCusker

Phone: (540) 568-6500

Email: mccuskdm@jmu.edu

The Bachelor of Fine Arts degree in Art with a major in graphic design is rooted in fundamental design principles, research and applications, while addressing current and emerging technologies through digital practice. The study of the historical and cultural context of the field broadens students' knowledge and nurtures their creativity.

Program objectives for the graphic design student are:

Articulate ideas and understand the fundamental elements and principles of graphic design while using correct terminology pertinent to the field.

Demonstrate a working knowledge of artistic methods, craft and formal structure as vehicles to enhance a solutions communicative value.

Demonstrate proficiency in both traditional and digital ways of making.

Develop diverse problem-solving methodologies that combine theory, research, analytical skills and conceptualization to create effective graphic design solutions.

Develop a professional graphic design portfolio reflective of one's knowledge and abilities that encompasses the contemporary design market.

The graphic design program objectives are enhanced by frequent field trips to design-related events, studio visits, guest speakers and vetted internship opportunities which provide students with exposure to top-notch professionals in the field. On campus, students can get involved in student clubs and organizations, such as student chapters of AIGA: The Professional Association for Design. There are opportunities to engage with visiting designers and exhibitions through the Duke Hall Gallery of Fine Art as well as collaborate with faculty and peers for shows at JMU galleries. Graphic design majors also have many opportunities to gain professional experience working for a variety of JMU offices and organizations.

Admission Requirements

Architectural Design, Art Studio, Graphic Design and Industrial Design Majors

All prospective freshmen, transfer and change of major students intending to major in architectural design, graphic design or studio art must meet JMU admission requirements as stated in the Undergraduate Catalog. In addition to meeting JMU admission requirements, all students seeking the BFA with a major in architectural design, art studio or graphic design, or the BS with a major in industrial design are required to submit a portfolio to the school's SlideRoom account (<https://jmuart.slideroom.com>). The submission of a portfolio is optional for students seeking the BA and BS with a major in art studio. All students, regardless of degree type, who wish to be considered for a scholarship must submit a portfolio to SlideRoom. The submission of a portfolio is seen as evidence of a student's interest and potential for future success in art. The deadline for submitting portfolios to SADAH's SlideRoom site can be found on the School's Portfolio page. There is a \$10 charge for this submission.

Transfer and Change of Major Students

Transfer and change of major students seeking the BFA with a major in architectural design, art studio, or graphic design or the BS with a major in industrial design are required to submit a portfolio and also need to upload

unofficial transcripts and a statement of intent to the school's SlideRoom account that explains their educational and artistic goals, articulating the reasons for choosing this area of study.

On-Campus Portfolio Feedback Days and Scholarships

All students who would like to be considered for scholarships are required to attend one of the on-campus or virtual portfolio feedback days. Students will show their original art and participate in a faculty interview. If time-based media examples (video and animation) are included, students will need to bring their own digital device for presentation purposes. Refer to the **SADAH website** for the dates of the upcoming portfolio feedback days and for additional portfolio requirements. All scholarship awards are based on merit and vary in amount. Tours of facilities and program information sessions will take place at on-campus events.

Off-Campus Portfolio Feedback Days

The SADAH also offers students the opportunity for faculty critiques on their portfolio, prior to their digital submission and before an on-campus or virtual portfolio scholarship interview. The off-campus portfolio feedback events provide an opportunity for students to meet SADAH's faculty. All prospective first-year, transfer and change of major students are strongly encouraged to attend a portfolio feedback day, on or off campus, prior to submitting their portfolio.

Graphic Design

Students seeking official acceptance into the graphic design major must enroll in GRPH 208 and submit a portfolio representing work completed in GRPH 101, GRPH 200 and GRPH 206. Students not admitted may reapply the following semester.

Admission to the graphic design major is selective and competitive for a limited number of reserved seats in upper-division (300-400 level) graphic design courses. Declaration of graphic design as a major and completion of lower-division (100-200) prerequisite ART and GRPH courses does not guarantee admission into the program. Admission to upper-division GRPH courses is based on completion of all prerequisite GRPH courses and merit as determined by a faculty review of portfolios submitted in satisfaction of GRPH 208. Portfolio Review.

GRPH 208. Portfolio Review is a 0 credit, pass/fail course that functions as a prerequisite to enrollment in all 300-400 level graphic design courses. Students should enroll in GRPH 208 during the semester following completion of lower-level GRPH courses, or concurrently with GRPH 206. GRPH 208 portfolios are reviewed each semester. Students enrolled in GRPH 208 will be emailed at the beginning of the semester and will be informed of the exact time and location of the GRPH 208 portfolio review.

Any art major may take lower-level GRPH courses, but is restricted from taking any 300-400 level graphic design course until GRPH 208 has been taken and passed.

Accepted students who receive a passing grade for GRPH 208 will be able to register for upper-division courses GRPH for the following semester and are required to furnish a Macintosh laptop computer and acquire an Adobe Creative Cloud subscription. Purchase recommendations can be found at: <http://www.jmu.edu/computing/purchase/dept.shtml>.

Students not accepted will have one opportunity to reapply in the following semester or may choose to continue in another major within the School of Art, Design and Art History.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education: The Human Community ¹	41
University electives	1
Major requirements (listed below)	78
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

Major Requirements

This major requires 78 credit hours in art, art history and art-related courses; 36 are graphic design concentration required and elective courses.

Required Courses

Foundation Courses: 18 Credit Hours

- ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**
- ART 104. Drawing I (0,6) **Credits: 3.00**
- ART 106. Three-Dimensional Design (0,6) **Credits: 3.00**
- ART 108. Drawing II (0,6) **Credits: 3.00**
- ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**
- ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

Required art studio courses (choose four of the following):
12 Credit Hours

- ART 220. Introductory Ceramics: Potter's Wheel (0,9) **Credits: 3.00**
or
- ART 222. Introductory Ceramics: Handbuilding (0,9) **Credits: 3.00**
- ART 232. Introduction to Fiber Arts: Structures **Credits: 3.00**
- ART 234. Introduction to Fiber Arts: Surfaces **Credits: 3.00**
- ART 240. Metal and Jewelry (0,9) **Credits: 3.00**
- ART 252. Introductory Painting (0,9) **Credits: 3.00**
- ART 260. Introductory Photography: Black and White (0,9) **Credits: 3.00**
- ART 270. Printmaking: Screenprint (0,9) **Credits: 3.00**
or
- ART 272. Printmaking: Relief and Intaglio **Credits: 3.00**
or
- ART 274. Printmaking: Lithography (0,9) **Credits: 3.00**
- ART 276. Introductory Book Arts: Materials and Structures **Credits: 3.00**
- ART 280. Sculpture (0,9) **Credits: 3.00**

Major Courses (Required): 33 Credit Hours

ARCD 303. History of Design **Credits: 3.00**
GRPH 101. Digital Media Design I (0, 9) **Credits: 3.00**
GRPH 200. Image Making (0, 6) **Credits: 3.00**
GRPH 201. Digital Media Design II **Credits: 3.00**
GRPH 206. Typography I (0, 9) **Credits: 3.00**
GRPH 208. Portfolio Review **Credits: 0.00**
GRPH 306. Typography II (0, 9) **Credits: 3.00**
GRPH 312. Web Design **Credits: 3.00**
GRPH 313. Interactive Media **Credits: 3.00**
GRPH 408. Brand Identity **Credits: 3.00**
GRPH 497. Graphic Design Senior Capstone **Credits: 6.00**

Major Courses (Electives): 15 Credit Hours

Major electives: **Credits: 6.00**
GRPH 300. Illustration (0, 9) **Credits: 3.00**
GRPH 301. Digital Media Design III **Credits: 3.00**
GRPH 304. Package Design (0, 9) **Credits: 3.00**
GRPH 375. Letterpress **Credits: 3.00**
GRPH 376. Intermediate Book Arts: Concept, Content, Form **Credits: 3.00**
GRPH 380. Wayfinding, Signage, Exhibit Design **Credits: 3.00**
GRPH 390. Independent Study in Graphic Design **Credits: 1.00 – 3.00**
GRPH 392. Topics in Graphic Design **Credits: 3.00**
GRPH 496. Internship in Graphic Design **Credits: 1.00 – 6.00**¹

Additional Courses

Art and design electives ² **Credits: 6.00**

Art history electives (300–400 level) ³ **Credits: 3.00**

Footnotes

¹ A maximum of six credit hours of practicum or internship may count toward the degree.

² Art and design electives may include courses from architectural design, art education, graphic design, industrial design, studio, studio assistant and internships. Excludes all art history courses and ART 200.

³ Excludes ARTH 490, ARTH 495 and ARTH 499.

Major Requirements Total: 78 Credit Hours

Recommended Schedule for Majors

First Year

First Semester

ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**
ART 104. Drawing I (0,6) **Credits: 3.00**
ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**

Madison Foundations (formerly Cluster One: Skills for the 21st Century) **Credits: 3.00**

General Education: The Human Community courses **Credits: 3.00**

Second Semester

ART 106. Three-Dimensional Design (0,6) **Credits: 3.00**
ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**
GRPH 101. Digital Media Design I (0, 9) **Credits: 3.00**
General Education: The Human Community **Credits: 6.00**

Total: 30 Credit Hours

Second Year

First Semester

ART 108. Drawing II (0,6) **Credits: 3.00**
GRPH 200. Image Making (0, 6) **Credits: 3.00**
Two-D or Three-D Studio Art Courses **Credits: 3.00**
General Education: The Human Community courses **Credits: 6.00**

Second Semester

GRPH 201. Digital Media Design II **Credits: 3.00**
GRPH 206. Typography I (0, 9) **Credits: 3.00**
GRPH 208. Portfolio Review **Credits: 0.00**
Two-D or Three-D Studio Art Courses **Credits: 3.00**
General Education: The Human Community courses **Credits: 6.00**

Total: 30 Credit Hours

Third Year

First Semester

ARCD 303. History of Design **Credits: 3.00**
GRPH 306. Typography II (0, 9) **Credits: 3.00**
GRPH 312. Web Design **Credits: 3.00**
General Education: The Human Community courses **Credits: 6.00**

Second Semester

GRPH 313. Interactive Media **Credits: 3.00**
Two-D or Three-D Studio Art Courses **Credits: 3.00**
Art history elective (300–400 level) **Credits: 3.00**
General Education: The Human Community courses **Credits: 6.00**

Total: 30 Credit Hours

Fourth Year

First Semester

GRPH 408. Brand Identity **Credits: 3.00**

Two-D or Three-D Studio Art Courses **Credits: 3.00**

GRPH Concentration Elective **Credits: 6.00**

General Education: The Human Community courses **Credits: 3.00**

Second Semester

GRPH 497. Graphic Design Senior Capstone **Credits: 6.00**

Art and art-related electives **Credits: 6.00**

General Education: The Human Community courses **Credits: 2.00**

University Elective (if total credits do not reach 120) **Credits: 1.00**

Total: 30 Credit Hours

Program Total: 120 Credit Hours

Art, Industrial Design Major, B.S.

Program Description

Coordinator: Kevin Phaup

Email: phaupkb@jmu.edu

Phone: (540) 568-4025

The Bachelor of Science degree in Art with a major in industrial design is an accredited professional program with an interdisciplinary, user-centered approach. Program objectives for industrial design students are to:

Employ diverse creative problem-finding skills.

Utilize design theory and research to understand user culture, context, and requirements.

Demonstrate a working knowledge of industry practices, conceptualization skills, and problem-solving.

Design and articulate complex solutions that are aesthetically and culturally appropriate, effective, and efficient.

Exhibit proficiency in both traditional and digital ways of making.

Critique and contextualize designs to cultivate ideas and meaningful solutions.

Create a professional industrial design portfolio reflective of one's knowledge and abilities that encompass current expectations in the professional practice of industrial design.

The industrial design program objectives are enhanced by frequent field trips to design events, guest speakers, workshops, and internship opportunities.

Design students have an opportunity to engage with design leaders in the field through field trips, events and participation in a professional design organization.

Admissions Requirements

Architectural Design, Art Studio, Graphic Design and Industrial Design Majors

All prospective freshmen, transfer and change of major students intending to major in architectural design, graphic design or studio art must meet JMU admission requirements as stated in the Undergraduate Catalog. In addition to meeting JMU admission requirements, all students seeking the BFA with a

major in architectural design, art studio or graphic design, or the BS with a major in industrial design are required to submit a portfolio to the school's SlideRoom account (<https://jmuart.slideroom.com>). The submission of a portfolio is optional for students seeking the BA and BS with a major in art studio. All students, regardless of degree type, who wish to be considered for a scholarship must submit a portfolio to SlideRoom. The submission of a portfolio is seen as evidence of a student's interest and potential for future success in art. The deadline for submitting portfolios to SADAH's SlideRoom site can be found on the School's Portfolio page. There is a \$10 charge for this submission.

Transfer and Change of Major Students

Transfer and change of major students seeking the BFA with a major in architectural design, art studio, or graphic design or the BS with a major in industrial design are required to submit a portfolio and also need to upload unofficial transcripts and a statement of intent to the school's SlideRoom account that explains their educational and artistic goals, articulating the reasons for choosing this area of study.

On-Campus Portfolio Feedback Days and Scholarships

All students who would like to be considered for scholarships are required to attend one of the on-campus or virtual portfolio feedback days. Students will show their original art and participate in a faculty interview. If time-based media examples (video and animation) are included, students will need to bring their own digital device for presentation purposes. Refer to the [SADAH website](#) for the dates of the upcoming portfolio feedback days and for additional portfolio requirements. All scholarship awards are based on merit and vary in amount. Tours of facilities and program information sessions will take place at on-campus events.

Off-Campus Portfolio Feedback Days

The SADAH also offers students the opportunity for faculty critiques on their portfolio, prior to their digital submission and before an on-campus or virtual portfolio scholarship interview. The off-campus portfolio feedback events provide an opportunity for students to meet SADAH's faculty. All prospective first-year, transfer and change of major students are strongly encouraged to attend a portfolio feedback day, on or off campus, prior to submitting their portfolio.

Industrial Design

Students seeking acceptance into the advanced industrial design courses must enroll in INDU 208 and submit a portfolio representing work comprised of projects completed in INDU 200, INDU 202, GRPH 101, INDU 220, INDU 380 and independent design related work. Students not admitted may reapply one time.

Admission to the industrial design major is selective and competitive for a limited number of reserved seats in upper-division (300-400 level) industrial design courses. Declaration of industrial design as a major and completion of lower-division (100-200) prerequisite art and design courses does not guarantee admission into the program. Admission to upper-division INDU courses is based on completion of all prerequisite art courses and merit as determined by faculty review of portfolios submitted in satisfaction of the course INDU 208. Portfolio Review.

INDU 208 is a 0 credit, pass/fail course that functions as a prerequisite to enrollment in 300-400 level industrial design advanced studio courses. Students should enroll in INDU 208 during the semester in which they are enrolled in INDU 202. INDU 208 portfolios are reviewed during the spring semester (February) prior to pre-registration. Students should contact the area coordinator of industrial design to determine the exact time and location for the INDU 208 portfolio review.

INDU 200 and INDU 202 are restricted to BS of ID majors who have passed ART 102, 104 and 106 only, and students are restricted from taking any 300-400 level industrial design advanced studio courses until INDU 208 has been taken and passed.

Accepted students who receive a passing grade for INDU 208 will be able to register for INDU upper division advanced studio courses for the following semester. Students not accepted will have one opportunity to reapply the following spring semester or may choose to continue in another major within the SADAH.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education requirements ¹	41
Quantitative requirement (in addition to General Education courses)	3
Scientific Literacy requirement (in addition to General Education courses)	3
Major requirements (listed below)	78
Total	125

Note: Students can double count one course, reducing the total credit hours to 122.

Major Requirements

The industrial design major requires 78 credit hours in art, art history and art-related courses. Of these hours, 42 credits must be in INDU courses, some of which may fulfill the B.S. Natural/Social Science requirement.

Footnote

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

Required Courses

Foundation Courses (9 credits)

ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**

ART 104. Drawing I (0,6) **Credits: 3.00**

ART 106. Three-Dimensional Design (0,6) **Credits: 3.00**

Art & Design Electives (6 credits)

Art and design electives may include studio-based courses from industrial design, graphic design, architectural design, studio, studio assistantships and internships. Excludes courses taken to fulfill the concentration courses, advanced studios, and art and design history.**

Footnote

**Also excludes ART 200, 205, 304 and 305

Required Concentration Courses (21 credits)

INDU 200. Introduction to Industrial Design **Credits: 6.00**
or

ARCD 200. Architect Design Studio I **Credits: 6.00**

GRPH 101. Digital Media Design I (0, 9) **Credits: 3.00**

INDU 202. Industrial Design Studio **Credits: 6.00**

INDU 208. Portfolio Review **Credits: 0.00**

INDU 220. CAD I: 3D Modeling **Credits: 3.00**

INDU 380. Materials and Processes **Credits: 3.00**

Advanced Studios (24 credits)

INDU 300. Product Design **Credits: 6.00**

INDU 302. Transportation Studio **Credits: 6.00**

INDU 400. Systems and Services **Credits: 6.00**

INDU 402. Social Innovation and Social Entrepreneurship **Credits: 6.00**

INDU 404. Industrial Design Advanced Special Topics Studio **Credits: 6.00**

INDU 406. Senior Thesis Studio **Credits: 6.00** (Instructor Permission Required)

INDU 408. Swing Studio Option **Credits: 6.00**

Art & Design History Courses (9 credits)

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

ARCD 303. History of Design **Credits: 3.00**

Interdisciplinary Electives (9 Credit Hours Total)

Society and Culture (choose one)

May fulfill the B.S. Natural/Social Science requirement.

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**

ANTH 205. Buried Cities, Lost Tribes: The Rise and Fall of Early Human Societies [C2HQC] **Credits: 3.00**

ANTH 323. Anthropology and Photography **Credits: 3.00**

SOCI 311. Sociology of the Environment **Credits: 3.00**

SOCI 315. Technology and Society **Credits: 3.00**

SOCI 337. Sociology of Gender **Credits: 3.00**

Engineering and Technology (choose one)

Students selecting ENGR electives must have approval from the course instructor and the INDU adviser.

ENGR 231. Engineering Design I **Credits: 2.00**
ENGR 232. Engineering Design II **Credits: 2.00**
ENGR 280. Projects in Engineering **Credits: 1.00 - 4.00**
ENGR 498. Advanced Topics in Engineering **Credits: 1.00-3.00** (Innovation)
ENGR 498. Advanced Topics in Engineering **Credits: 3.00** (Realization)
ENGR 498. Advanced Topics in Engineering **Credits: 3.00** (Human Centered Design)
ENGR 498. Advanced Topics in Engineering **Credits: 3.00** (Innovation Exchange)
ENGR 498. Advanced Topics in Engineering **Credits: 3.00** (Systems Design and Placemaking)
ENGR 480. Advanced Projects in Engineering **Credits: 1.00 - 4.00**
ISAT 211. Issues in Modern Production Systems **Credits: 3.00**
ISAT 330. Sustainable Manufacturing Systems **Credits: 3.00**

Business, Marketing and Entrepreneurship (choose one)

COB 318. Legal and Ethical Environment of Business **Credits: 3.00**
MKTG 380. Principles of Marketing **Credits: 3.00**
MGT 472. New Venture Creation **Credits: 3.00**
MGT 305. Organizational Behavior and Human Resource Management **Credits: 3.00**
MGT 310. Business Fundamentals for Entrepreneurs **Credits: 3.00**

Total: 78 Credit Hours

Recommended Schedule for Majors

First Year

General Education *12 Credit Hours*
Art Foundations *9 Credit Hours (ART 102, ART 104, ART 106)*
Art History *6 Credit Hours (ARTH 205, ARTH 206)*
Quantitative Reasoning *3 Credit Hours*

Total: 30 Credit Hours

Second Year

General Education and Interdisciplinary Elective **Credits: 12.00**
INDU 200. Introduction to Industrial Design **Credits: 6.00**
INDU 202. Industrial Design Studio **Credits: 6.00**
INDU 208. Portfolio Review **Credits: 0.00**
INDU 220. CAD I: 3D Modeling **Credits: 3.00**
INDU 380. Materials and Processes **Credits: 3.00**
GRPH 101. Digital Media Design I (0, 9) **Credits: 3.00**

Total: 33 Credit Hours

Third Year

General Education **Credits: 9.00**
Scientific Literacy **Credits: 3.00**

Advanced Studio **Credits: 6.00**
Advanced Studio **Credits: 6.00**
Art and Design Elective **Credits: 3.00**
ARCD 303. History of Design **Credits: 3.00**

Total: 30 Credit Hours

Fourth Year

Advanced Studio *6 Credit Hours*
Advanced Studio *6 Credit Hours*
Art and Design Electives *3 Credit Hours*
General Education *9 Credit Hours*
Interdisciplinary Elective *6 Credit Hours*

Total: 30 Credit Hours

Program Total: 125 Credit Hours

Art Education Professional PK-12 Licensure

Coordinator: Karin Tollefson-Hall
Phone: (540) 568-4304
Email: tollefk1@jmu.edu

Art education professional PK-12 licensure is available to all studio and design majors. In addition to the general education and academic major requirements, students desiring PreK-12 teaching licensure in art must complete 26 credits of additional course work in art education, education and psychology, and 16 credits of student teaching. It is necessary to be admitted to the teacher education program prior to enrolling in professional education courses. For a complete description of admission and retention policies and procedures for teacher education, refer to the College of Education.

Students seeking licensure are encouraged to consult regularly with the program coordinator of art education. The undergraduate degree leading to licensure must include the following minimum requirements in art:

Nine credits must be earned in art history and art appreciation.
Six credits must be earned in ceramics and crafts, with a minimum of one course in ceramics.
Six credits must be earned in three-dimensional media, with one course in sculpture.
Twelve credits must be earned in four different two-dimensional media.
Twenty-seven studio credits, with a minimum of six credits in each of three separate studio areas.

Course Requirements

The following is a list of the required courses leading to PK-12 art licensure and a suggested sequence of when each may be taken.

Required Courses

ART 304. Methods of Art Criticism **Credits: 3.00** (spring, second year)
ARED 300. Elementary Art Education Methods (1, 4) **Credits: 3.00** (fall, third year)

ARED 302. Secondary Art Education Methods **Credits: 3.00** (spring, third year)
ARED 400. Visual Arts Across the Curriculum (1,4) **Credits: 3.00** (fall, fourth year)
ARED 490. Field Experiences in Art Education **Credits: 1.00-3.00** (ARED 490 repeatable; taken concurrently with ARED 300, ARED 302 and ARED 400 for two credit hours three times for a total of six credit hours)

Total: 18 Credit Hours

Required Education and Psychology Courses

Required Courses

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00** ^{1,2}
EDUC 200. Foundations of Education in the United States **Credits: 3.00** ²
LED 420. Content Area Literacy, K-12 **Credits: 2.00**
ARED 480. Student Teaching **Credits: 8.00**
(taken twice for a total of 16 Credit Hours)

Total: 24 Credit Hours

Footnotes

¹ PSYC 160 may double-count toward General Education Cluster Five.
² Minimum grade of "C" required in EDUC 200, PSYC 160 and WRTC 103.

Art History, B.A.

Program Description

Coordinator: David Ehrenpreis
Phone: (540) 568-5656
Email: ehrenpdh@jmu.edu

The Bachelor of Arts in art history is intended for students who wish to study the history of the visual arts, including the cultural and social context in which they were created. It is the mission of the art history program to educate students in global and cross-cultural perspectives on the arts.

Students majoring in art history will develop a general knowledge of exemplary monuments, artists, art media, art periods and artistic styles. Students will also:

- Describe, analyze and interpret the form and content of individual works of art in relation to their cultures and historical contexts.
- Become familiar with art history theory and methods of analysis and criticism. Research and write about significant artists, artistic events, periods and artistic concepts.
- The art history program encourages majors and minors to participate in internship opportunities at museums, galleries and other art related settings, and it provides up-to-date information about jobs and graduate programs in art history and related fields. Visiting scholars, campus art exhibitions, trips to major museums and the JMU Study Abroad program provide students with opportunities to study and apply their art history knowledge outside the classroom. Upon completion of the art history major, students will have been

exposed to a broad background and knowledge of the opportunities for graduate school and employment. The art history program also advocates cross disciplinary education and actively supports students who double major with other disciplines. Throughout the student's undergraduate years, faculty provide individualized curricular advising and career mentorship.

Internship/Independent Study Credit

A maximum of three credits of art history internship, independent study or honors course work may be applied toward the major in art history. A student may petition the art history coordinator to apply six credit hours toward the art history major if the internship or independent study course work is directly relevant to the student's interests and career goals.

Requirements for Art History as a Second Major

Students in any degree program may study art history as a second major by completing the 39 credit art history requirement. Students studying art history as a second major do not need to complete the requirements for the B.A. degree if their first major will complete the requirements for a different baccalaureate degree. However, non-B.A. degree students completing art history as a second major are strongly encouraged to complete the B.A. foreign language requirement.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
University electives ³	23-37
Major requirements	39
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.
² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures placement test.
³ Depends on number of hours needed to fulfill the B.A. foreign language requirement. If they are completed in six hours, students should use the larger number of general electives to complete a second major or minor that complements art or art history or, for students intending to pursue graduate degrees, to gain reading knowledge of a second foreign language.

Major Requirements

The major in art history requires 39 credit hours in art history and studio courses, as the following chart shows. At least six of these credit hours must be 400-level art history courses.

Core courses at the 200 level are broad interpretive overviews of art history that combine lecture and discussion to permit students to learn the content and chronology of world art history; to learn how art historians collect, analyze and synthesize evidence; and engage in introductory exercises in the discipline. They generally include short formal writing assignments and exams with essay sections.

Distributives at the 300 level also combine lecture and discussion, more narrowly survey specific periods or cultures and address aspects of art historical methodology. These courses require longer formal writing assignments and include student research. Courses at the 400 level are seminars on specialized topics that center on advanced student research. A single course may not fulfill more than one distribution requirement.

Required Courses

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**
ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**
ARTH 300. Art History Seminar **Credits: 3.00**¹
ARTH 400. Art History Research Portfolio **Credits: 0.00**

Non-Western Electives (choose one of the following):

ARTH 312. African Art: Sub-Saharan **Credits: 3.00**
ARTH 325. Topics in Non-Western Art and Architecture **Credits: 3.00-9.00**
ARTH 418. Modern and Contemporary African Art **Credits: 3.00**
ARTH 419. Topics in African Art **Credits: 3.00**
ARTH 424. Arts of Ancient Egypt **Credits: 3.00**
ARTH 425. Advanced Topics in Non-Western Art **Credits: 3.00**
ARTH 484. Art of the Americas **Credits: 3.00**

Cross-Cultural Electives (choose one of the following):

ARTH 326. Topics in Cross-Cultural Art **Credits: 3.00-9.00**
ARTH 332. Islamic Art and Architecture **Credits: 3.00**
ARTH 426. Advanced Topics in Cross-Cultural Art **Credits: 3.00-9.00**
ARTH 440. City of Jerusalem **Credits: 3.00**
ARTH 446. Renaissance Art and the East **Credits: 3.00**
ARTH 488. African American Art **Credits: 3.00**

Pre-Modern Elective (choose one of the following):

ARTH 312. African Art: Sub-Saharan **Credits: 3.00**
ARTH 327. Topics in Pre-Modern Art **Credits: 3.00**
ARTH 332. Islamic Art and Architecture **Credits: 3.00**
ARTH 424. Arts of Ancient Egypt **Credits: 3.00**
ARTH 427. Advanced Topics in Pre-Modern Art **Credits: 3.00**
ARTH 440. City of Jerusalem **Credits: 3.00**
ARTH 446. Renaissance Art and the East **Credits: 3.00**
ARTH 484. Art of the Americas **Credits: 3.00**

Modern and Contemporary Elective (choose one of the following):

ARTH 304. History of Photography **Credits: 3.00**
ARTH 328. Topics in Modern and Contemporary Art **Credits: 3.00**
ARTH 360. Nineteenth Century Art **Credits: 3.00**
ARTH 372. Modern Art From 1900-1945 **Credits: 3.00**
ARTH 380. American Art to 1870 **Credits: 3.00**
ARTH 382. American Art from 1870 **Credits: 3.00**
ARTH 404. Topics in the History of Photography **Credits: 3.00**
ARTH 406. Monticello **Credits: 3.00**
ARTH 418. Modern and Contemporary African Art **Credits: 3.00**
ARTH 419. Topics in African Art **Credits: 3.00**
ARTH 428. Advanced Topics in Modern and Contemporary Art **Credits: 3.00**
ARTH 471. Commemoration and Controversy: Public Art in America **Credits: 3.00**
ARTH 472. Modern Art Since 1945 **Credits: 3.00**
ARTH 488. African American Art **Credits: 3.00**

Additional Courses

Art history electives (300-400 level) ¹**Credits: 12.00**
Studio art and design electives (any level) ² **Credits: 6.00**

Footnotes

¹ ART 305. Seminar in Aesthetics, may count as an art history elective. A maximum of three credits from ARTH 490, ARTH 495 or ARTH 499 may count toward the major.

² ART 200. Art in General Culture [C2VPA] may not count as a studio art and design elective.

Major Requirements Total: 39 Credit Hours

Internship/Independent Study Credit

A maximum of three credits of art history internship, independent study or honors course work may be applied toward the major in art history. A student may petition the art history coordinator to apply six credit hours toward the art history major if the internship or independent study course work is directly relevant to the student's interests and career goals.

Concentration

Museum Studies Concentration

The museum studies concentration enriches the art history curriculum by offering course work that examines the critical role that museums have played in constructing the discipline and pedagogy of art history. History and theory-oriented classes will introduce students to the role and function of museums in society and the ways in which museums both reflect and perpetuate the values of the cultures that create them. Experiential practica or internship courses will expose students to the wide range of work conducted in museums, including curation, collections management, conservation, education, design and

installation, media and public relations, publications, development and administration.

While the concentration is academic and not vocational, it offers students valuable hands-on experience beneficial for admission into graduate school and entry into the competitive market of art-related professions. Virginia is a state that boasts a plethora of art museums, house museums, history museums, and historic and archaeological sites. Art history majors who complete the concentration will be well positioned for seeking employment in regional and state museums.

The museum studies concentration consists of five courses (15 credit hours). Students are required to complete three core courses and two elective courses. Students may only count three credit hours toward both the art history major and the museum studies concentration.

A 3.3 GPA in the minimum of nine credits in Art History (ARTH) and General Education Art History (ARTH) courses are required to enroll in the concentration. To apply, students submit an unofficial transcript to the area coordinator. Students may apply to the concentration in the fall or spring semester, but no later than the last day of the course add registration deadline.

Required Courses

ARTH 394. Introduction to Museum Work **Credits: 3.00**

or

HIST 394. Introduction to Museum Work **Credits: 3.00**

ARTH 408. The Museum: History and Controversies **Credits: 3.00**

or

HIST 408. The Museum: Histories and Controversies **Credits: 3.00**

ARTH 495. Internship in Art History **Credits: 1.00 - 3.00**

Electives (choose two of the following):

ARTH 301. Institutions and Professions in Art History **Credits: 3.00**

ARTH 309. Topics in Museum Studies **Credits: 3.00**

ARTH 396. History Beyond the Classroom: Public History **Credits: 3.00**

or

HIST 396. History Beyond the Classroom: Public History **Credits: 3.00**

ARTH 406. Monticello **Credits: 3.00**

or

HIST 406. Monticello **Credits: 3.00**

ARTH 409. Topics in Museum Studies **Credits: 3.00**

ARTH 491. Exhibition Seminar **Credits: 3.00**

ARTH 492. History From Things: Material Culture **Credits: 3.00**

or

ANTH 492. History from Things: Material Culture **Credits: 3.00**

or

HIST 492. History From Things: Material Culture **Credits: 3.00**

ARTH 493. Historic Preservation **Credits: 3.00**

or

HIST 493. Historic Preservation **Credits: 3.00**

ANTH 494. Field Techniques in Archaeology **Credits: 4.00 - 8.00**

HIST 440. The History Museum **Credits: 3.00**

Museum Studies Concentration Total: 15 Credit Hours

Recommended Schedule For Majors

First Year

Choose one of the following: 3 Credit Hours

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**
or

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

Foreign language courses **Credits: 6.00**

Madison Foundations (formerly Cluster One: Skills for the 21st Century) **Credits: 9.00**

General Education course **Credits: 3.00-6.00**

General electives **Credits: 6.00-9.00**

First Year Total: 30 Credit Hours

Second Year

Choose one of the following: 3 Credit Hours

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**
or

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

Choose foreign language (if needed) or general electives **Credits: 6.00**

General Education courses **Credits: 18.00**

Studio Art elective **Credits: 3.00**

Second Year Total: 30 Credit Hours

Third Year

ARTH 300. Art History Seminar **Credits: 3.00**

Non-Western art history elective **Credits: 3.00**

Western art history electives **Credits: 6.00**

General electives **Credits: 3.00**

Studio Art elective **Credits: 3.00**

General Education courses **Credits: 12.00**

Third Year Total: 30 Credit Hours

Fourth Year

Art History electives **Credits: 12.00**

General electives **Credits: 18.00**

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Admission Requirements

Students intending to major in art history are not required to submit a portfolio, but should follow the regular JMU admissions process. To enroll in the museum studies concentration in art history, students must have a minimum

3.3 GPA in the major and a minimum of nine credits in art history and general education art history courses.

Art Minor

The art minor attempts to:

Broaden students' understandings of the value and role of the visual arts in general culture.

Deepen their appreciation for personal artistic production.

Enhance their creativity and ability to think independently.

Minor Requirements

A minimum of 18 credit hours is required for the art minor.

Required Courses

ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**

ART 104. Drawing I (0,6) **Credits: 3.00**

Art or art-related courses (any level) *6 Credit Hours*¹

Art or art-related courses (300-400 level) *6 Credit Hours*²

Total: 18 Credit Hours

Footnotes

¹ Art and design studio courses are restricted to ARCD, ART, GRPH and INDU courses, but do not include ART 200, ART 205, ART 304, ART 305, ART 491, ART 493, ART 496 and ART 499.

² These 300-400 level courses cannot count toward the students' major(s).

Art History Minor

Minor Requirements

Students enrolled in any degree program may minor in art history by completing a minimum of 18 credit hours in art history courses, as the following chart shows. At least six of these credit hours must be 400-level art history courses. The student's minor program is subject to approval by the school director.

Required Courses

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**
Art history courses (300-400 level) *12 Credit Hours*¹

Total: 18 Credit Hours

Footnote

¹ For studio art, graphic design and architectural design majors, required ARTH courses in the art emphasis program may count toward the art history minor. Excludes ARTH 390, ARTH 490, ARTH 495 and ARTH 499.

Department of Biology

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Senior Lecturers

E. Doyle, O. Hyman

Lecturers

M.S. Burnett, T. Deem, T. Hynd, P. Kilkenny, J. Marquardt, C. Murray

Instructors

W. Flint, J. Powers, J. Stutzman, R. Walters

Staff

L. Brefo, P. Crider, C. Curry, J. Fox, K. Norment

Mission Statement

The Department of Biology holds as its primary core value a commitment to providing superlative teaching for students. To accomplish this mission, we will create an environment for learning that will include opportunities for undergraduate research, a broadly-based academic program, a supportive, diverse and collaborative faculty, an understanding of the process of science and a recognition of the importance of community outreach and involvement.

Career Opportunities and Advanced Fields of Study

Anthropology
Aquatic Science
Biodiversity
Bioinformatics
Biotechnology
Botany
Clinical Laboratory Sciences
Dentistry
Ecology and Environmental Science
Epidemiology
Forensic Science
Forestry
Genetic Counseling
Graduate School in the Biological Sciences
Immunology
Landscape Architecture
Medicine
Microbiology
Microscopy
Neurobiology
Nursing
Occupational Therapy
Optometry
Pharmacology
Physical Therapy
Physician Assistant
Physiology
Research Assistant
Scientific Writing
Secondary Education
U.S. Fish and Wildlife Service
Veterinary Medicine
Virology
Zoology

Students interested in pursuing any of these career opportunities should contact the biology office. An appropriate adviser will be assigned for mentoring and course selection.

Co-curricular Activities and Organizations

Biology majors participate in activities such as:

Weekly departmental seminars
Tri-Beta, a national biology society
Pre-professional health clubs and honor society
Summer and academic-year research opportunities
Summer courses at biological field stations
Internships with various organizations
Aiding in teaching as student assistants
Presenting papers at meetings
Volunteering at Sentara RMH and with the rescue squad

Biology, B.S.

Program Description

The department offers a four-year B.S. degree program for a major in biology and for a major in biology qualifying for the Secondary Collegiate Professional License. Students may not receive dual credit toward the biology major for 300- and 400-level BIO courses that are applied toward the biotechnology major.

Biology majors must complete 40 credit hours of biology courses including 16 credit hours at the 300 and 400 level. Specific requirements include four core courses (BIO 140/BIO 140L, BIO 150/BIO 150L, BIO 240/BIO 240L and BIO 250/BIO 250L), at least two upper-division laboratory courses and one course from a list of courses with an emphasis on organismal diversity. In addition, B.S. biology majors must complete a set of cognate courses in chemistry, mathematics, statistics and physics that are listed below. Students are encouraged to participate in independent research with a faculty mentor. Credits earned doing research will count toward the biology major but some restrictions apply.

When requested, senior biology majors are expected to participate in program assessment test activities as a graduation requirement. Assessment information helps the department modify the curriculum to meet student needs.

Credit by Examination

When evidence of sufficient background or preparation is presented, the Department of Biology offers credit by examination in many of its non-lab courses at the discretion of the course instructor or coordinator. Students seeking such credit should make arrangements with the course instructor or coordinator and obtain approval of the department head.

Teaching Licensure

Biology majors need courses in physics, geology and organic chemistry for many science education positions.

In addition to the general education and academic major requirements, biology majors desiring secondary teacher licensure must be admitted to teacher education, complete the pre-professional program in secondary education at the undergraduate level and complete the graduate level Master of Arts in Teaching degree.

It is critical that students seeking licensure consult regularly with both their education adviser and their major adviser to support their progression through the programs. For a full description of the program in secondary teaching, refer to the Department of Middle, Secondary and Mathematics Education, in addition to the College of Education.

Special Requirements

In order for BIO 270/BIO 270L and BIO 290/BIO 290L credit to be transferred, both semesters of an Anatomy and Physiology course (A&P I and A&P II) must be completed with a minimum grade of "C" from the same institution. A single semester of either of these sequences transfers as BIO 000. Only BIO 290/BIO 290L can be applied towards biology major electives; BIO 270/BIO 270L does not apply towards biology electives.

Practical hands-on experience in the field and/or laboratory is important content of laboratory-based courses. Transfer credit for courses including

laboratories will only be awarded for those having skill and application content comparable to that of JMU courses. Elective biology credits applicable toward the major or minor are transferred as specific courses or as BIO 200, BIO 426 or BIO 427. Credits not applicable toward the major or minor, but applicable toward the 120-hour degree requirement, are transferred as BIO 000. A maximum of eight credit hours of first year (100) level BIO courses may be applied to the biology major or minor requirements.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement (in addition to General Education) ²	3
Scientific Literacy requirement (in addition to General Education) ²	3-4
Biology requirements (listed below)	40
Cognate requirements (listed below)	31-36
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The quantitative and scientific literacy requirements are met by courses required in the major.

Major Requirements

Core Course Requirements: 16 Credit Hours

- BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
- BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
- BIO 150. Foundations of Biology II **Credits: 3.00 and**
- BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**
- BIO 240. Genetics **Credits: 3.00 and**
- BIO 240L. Genetics Laboratory **Credits: 1.00**
- BIO 250. Quantitative Ecology and Evolution **Credits: 3.00 and**
- BIO 250L. Quantitative Ecology and Evolution Laboratory **Credits: 1.00**

Additional Biology Course Requirements: 24 Credit Hours

Students in the biology major must complete at least 24 credit hours of approved biology courses and at least 16 of these must be at the 300 and 400 levels. Up to 8 credit hours of 200 level BIO courses may count towards the 24 credit hour requirement, excluding BIO 270/BIO 270L. Also, one course must be from a group of courses on organismal diversity and two courses must have

a laboratory component. Courses in both lists may count for both requirements. Three credits of independent research (BIO 497 and/or BIO 499A/BIO 499B/BIO 499C) may be used for one, but only one, of the laboratory courses. Students completing the biology major must earn a minimum grade of "C-" in BIO 140, BIO 140L, BIO 150, BIO 150L, CHEM 131, CHEM 131L and CHEM 132.

Choose at least one organismal diversity courses:

- BIO 310. Marine Biology **Credits: 3.00**
- BIO 320. Comparative Anatomy of Vertebrates **Credits: 4.00**
- BIO 340. Morphology and Anatomy of Vascular Plants **Credits: 4.00**
- BIO 357. Galápagos Islands: Biodiversity and Conservation **Credits: 3.00**
- BIO 360. Plant Biology **Credits: 3.00**
- BIO 364. Human Uses of Plants **Credits: 3.00**
- BIO 386. Field Botany **Credits: 4.00**
- BIO 402. Forest Ecology **Credits: 4.00**
- BIO 405. Vertebrate Paleontology **Credits: 3.00**
- GEOL 405. Vertebrate Paleontology **Credits: 3.00**
- BIO 412. Mammalogy **Credits: 4.00**
- BIO 420. Medical Parasitology **Credits: 3.00**
- BIO 430. Ornithology: Research and Current Advances **Credits: 4.00**
- BIO 449. Insect Ecology **Credits: 4.00**
- BIO 469. Biological Illustration **Credits: 3.00**
- BIO 474. Reproductive Physiology **Credits: 3.00**
- BIO 484. Aquatic Microbiology **Credits: 3.00**
- BIO 486. Systematics of Vascular Plants **Credits: 4.00**

Choose at least two laboratory courses:

- BIO 318. Experimental Vertebrate Development **Credits: 2.00**
- BIO 320. Comparative Anatomy of Vertebrates **Credits: 4.00**
- BIO 340. Morphology and Anatomy of Vascular Plants **Credits: 4.00**
- BIO 343L. Immunology Laboratory **Credits: 1.00**
- BIO 346. Laboratory in Bacterial Pathogenomics **Credits: 2.00**
- BIO 348L. Medical Microbiology Laboratory **Credits: 1.00**
- BIO 350. Paleobiology **Credits: 4.00**
- BIO 354. Global Climate Change and Life: Ecological and Biological Impacts of Climate Variability **Credits: 4.00**
- BIO 360L. Plant Biology Laboratory **Credits: 1.00**
- BIO 364L. Laboratory in Human Uses of Plants **Credits: 1.00**
- BIO 370. Animal Physiology **Credits: 4.00**
- BIO 386. Field Botany **Credits: 4.00**
- BIO 387L. Environmental Microbiology Laboratory **Credits: 1.00**
- BIO 400. Geology and Ecology of the Bahamas **Credits: 3.00**
- GEOL 400. Geology and Ecology of the Bahamas **Credits: 3.00**
- BIO 402. Forest Ecology **Credits: 4.00**
- BIO 410. Advanced Human Anatomy **Credits: 3.00**
- BIO 412. Mammalogy **Credits: 4.00**
- BIO 430. Ornithology: Research and Current Advances **Credits: 4.00**
- BIO 432. Light Microscopy **Credits: 4.00**
- BIO 445. Neurobiology **Credits: 4.00**

BIO 446. Experimental Neurobiology **Credits: 4.00**
 BIO 448L. Developmental Neurobiology Laboratory **Credits: 1.00**
 BIO 449. Insect Ecology **Credits: 4.00**
 BIO 452. Population Ecology **Credits: 4.00**
 BIO 455. Plant Physiology **Credits: 4.00**
 BIO 457. Biological Applications of Geographic Information Systems **Credits: 4.00**
 BIO 459. Freshwater Ecology **Credits: 4.00**
 BIO 460. Plant Biotechnology **Credits: 4.00**
 BIO 480L. Advanced Molecular Biology Lab **Credits: 1.00**
 BIO 481. Genomics **Credits: 4.00**
 BIO 482. Human Histology **Credits: 4.00**
 BIO 483. Bioinformatics **Credits: 4.00**
 BIO 484. Aquatic Microbiology **Credits: 3.00**
 BIO 486. Systematics of Vascular Plants **Credits: 4.00**
 BIO 490. Mechanics of Animal Movement **Credits: 4.00**

Additional Information

Only one Topics in Biology (BIO 426/427) may fulfill one of the laboratory course and/or organismal requirements. These course numbers can be repeated with a change in topic, but only 12 credits from BIO 426/427 can be applied toward the 40-hour biology course requirement.

When choosing additional biology courses to complete the 40 credit hour requirement, students are strongly encouraged to discuss their career interests with an adviser who can help select courses best suited to their needs. Students are encouraged to participate in independent research and teaching courses with a faculty mentor, though a maximum of eight credits of BIO 492, BIO 493, BIO 494, BIO 495, BIO 496, BIO 497, BIO 499A/499B/499C and ISCI 450 can be counted toward the biology major.

Major Requirements Total: 40 Credit Hours

Cognate Requirements

The following five groups of support courses are required for the biology major. Consult your academic adviser about which courses are appropriate.

Complete all of the following: 11 Credit Hours

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
 CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
 CHEM 132. General Chemistry II **Credits: 3.00**
 CHEM 132L. General Chemistry Laboratory **Credits: 1.00**
 CHEM 241. Organic Chemistry I **Credits: 3.00**

Choose one of the following: 3 Credit Hours

Chemistry beyond the minimum requirement is recommended in many areas of biology. Consult with your adviser about which courses are appropriate. Students who take BIO 361/CHEM 361 in addition to CHEM 242, CHEM 353, CHEM 354 or GEOL 355/CHEM 355 will have BIO 361/CHEM 361 applied toward their BIO 300-400-level elective requirements. BIO 361/CHEM 361 may not be used for both a chemistry cognate and a biology major elective.

CHEM 242. Organic Chemistry II **Credits: 3.00**

BIO 361. Biochemistry I **Credits: 3.00**
 CHEM 361. Biochemistry I **Credits: 3.00**
 CHEM 353. Environmental Chemistry **Credits: 3.00**
 CHEM 354. Environmental Chemistry Field Camp **Credits: 3.00 (summer only)**
 GEOL 355. Geochemistry of Natural Waters **Credits: 3.00**
 CHEM 355. Geochemistry of Natural Waters **Credits: 3.00**

Choose one of the following courses: 3-4 Credit Hours

Statistics beyond the minimum requirement is desirable in many areas of biology. Consult your adviser about which courses are appropriate.

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**
 MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**
 MATH 285. Data Analysis **Credits: 4.00**
 MATH 318. Introduction to Probability and Statistics **Credits: 4.00**

Choose one of the following sets of courses: 3-4 Credit Hours

Mathematics beyond the minimum requirement is desirable in many areas of biology. Consult your adviser about which courses are appropriate.

MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**
 MATH 235. Calculus I [C3QR] **Credits: 4.00**
 MATH 268. Data Analysis and Visualization **Credits: 3.00**
 MATH 309. SAS Programming and Data Management **Credits: 3.00**
 MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**
 MATH 322. Applied Linear Regression **Credits: 3.00**
 MATH 324. Applied Nonparametric Statistics **Credits: 3.00**
 MATH 325. Survey Sampling Methods **Credits: 3.00**
 MATH 327. Categorical Data Analysis **Credits: 3.00**
 MATH 354. Introduction to Biometrics **Credits: 4.00**
 MATH 368. Statistical Computing **Credits: 3.00**
 BIO 454. Introduction to Biometrics **Credits: 4.00**
 DATA 200. Introduction to Data **Credits: 3.00**

Choose one of the following sets of courses: 8 Credit Hours

PHYS 140. College Physics I [C3PP] **Credits: 3.00 and**
 PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**
and
 PHYS 150. College Physics II **Credits: 3.00 and**
 PHYS 150L. General Physics Laboratory **Credits: 1.00**
or

PHYS 240. University Physics I [C3PP] **Credits: 3.00 and**
 PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00**
and
 PHYS 250. University Physics II **Credits: 3.00 and**
 PHYS 250L. University Physics Laboratory II **Credits: 1.00**

Cognate Requirements Total: 31-36 Credit Hours

Concentrations

Ecology and Environmental Biology Concentration

The biology department offers a concentration within the biology major for students with interest in ecology, field biology, natural resources, environmental biology, conservation biology, evolution, animal behavior and organismal biology. Students choosing a concentration in ecology and environmental biology must meet all of the requirements for the biology major as well as the following additional requirements. Courses for this concentration can also satisfy biology major requirements.

Students must complete at least 20 credit hours from the following list.

With prior approval from the concentration coordinator, BIO 426 and/or BIO 427 may be substituted. Students are strongly encouraged to discuss their career interests with an adviser who can help select courses best suited to their needs. In addition to the courses listed below, a maximum of eight credits of BIO 495, BIO 496, BIO 497 and BIO 499A/BIO 499B/BIO 499C can be counted toward the EEB concentration.

- BIO 245. General Microbiology **Credits: 3.00** ^{1,2} and
BIO 245L. General Microbiology Laboratory **Credits: 1.00**
BIO 310. Marine Biology **Credits: 3.00** ¹
BIO 320. Comparative Anatomy of Vertebrates **Credits: 4.00** ^{1,2}
BIO 340. Morphology and Anatomy of Vascular Plants **Credits: 4.00** ^{1,2}
BIO 342. Mathematical Models in Biology **Credits: 3.00**
or
MATH 342. Mathematical Models in Biology **Credits: 3.00**
BIO 354. Global Climate Change and Life: Ecological and Biological Impacts of Climate Variability **Credits: 4.00**
BIO 357. Galápagos Islands: Biodiversity and Conservation **Credits: 3.00** ¹
BIO 360. Plant Biology **Credits: 3.00** ¹
BIO 370. Animal Physiology **Credits: 4.00** ²
BIO 386. Field Botany **Credits: 4.00** ^{1,2}
BIO 387. Environmental Microbiology **Credits: 3.00**
BIO 387L. Environmental Microbiology Laboratory **Credits: 1.00** ²
BIO 395. Comparative Animal Behavior **Credits: 3.00**
or
PSYC 395. Comparative Animal Behavior **Credits: 3.00**
BIO 400. Geology and Ecology of the Bahamas **Credits: 3.00**
or
GEOL 400. Geology and Ecology of the Bahamas **Credits: 3.00**
BIO 402. Forest Ecology **Credits: 4.00** ²
BIO 404. Evolutionary Analysis **Credits: 3.00**
BIO 405. Vertebrate Paleontology **Credits: 3.00**
or
GEOL 405. Vertebrate Paleontology **Credits: 3.00**
BIO 412. Mammalogy **Credits: 4.00** ^{1,2}
BIO 418. Conservation Biology **Credits: 3.00**
BIO 430. Ornithology: Research and Current Advances **Credits: 4.00** ^{1,2}
BIO 447. Evolution and Ecology of Infectious Disease **Credits: 3.00**
BIO 449. Insect Ecology **Credits: 4.00** ^{1,2}
BIO 451. Current Topics in Human Development and Evolution **Credits: 3.00**

- BIO 452. Population Ecology **Credits: 4.00** ²
BIO 453. Microbial Ecology and Evolution **Credits: 3.00**
BIO 454. Introduction to Biometrics **Credits: 4.00**
BIO 455. Plant Physiology **Credits: 4.00** ²
BIO 457. Biological Applications of Geographic Information Systems **Credits: 4.00** ²
BIO 459. Freshwater Ecology **Credits: 4.00** ²
BIO 484. Aquatic Microbiology **Credits: 3.00** ^{1,2}
BIO 486. Systematics of Vascular Plants **Credits: 4.00** ^{1,2}

Footnotes

¹ Meets the biology major requirement for an organismal diversity course.

² Meets one of the biology major requirements for laboratory/field courses.

Students must take two additional cognate courses:

Choose one Statistics course: 3–4 Credit Hours

- MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**
MATH 322. Applied Linear Regression **Credits: 3.00**
MATH 324. Applied Nonparametric Statistics **Credits: 3.00**
MATH 325. Survey Sampling Methods **Credits: 3.00**
BIO 454. Introduction to Biometrics **Credits: 4.00**

Choose one Geographic Information Systems course: 3–4 Credit Hours

- GEOG 215. Introduction to Geographic Information Science and Cartography **Credits: 3.00**
BIO 457. Biological Applications of Geographic Information Systems **Credits: 4.00**

Ecology and Environmental Biology Concentration Additional Information

It is highly recommended that students take additional upper-level degree elective courses in geography/GIS (such as GEOG 466 or GEOG 467) and in statistics (such as MATH 322 or MATH 324). Students should consult with their adviser about which courses are appropriate.

Ecology and Environmental Biology Concentration Total: 26–28 Credit Hours

Microbiology Concentration

Concentration Coordinator: Steve Cresawn
E-mail: cresawsg@jmu.edu

The biology department offers a concentration within the biology major for students with interest in bacteriology, virology, immunology, parasitology and infectious disease. Students choosing a concentration in microbiology must meet all the requirements for the biology major, including the following specific requirements.

Complete a total of at least 18 credit hours from the following courses.

General Microbiology Requirements: 5 Credit Hours

Take all of the following courses:

BIO 245. General Microbiology **Credits: 3.00**

BIO 245L. General Microbiology Laboratory **Credits: 1.00**

BIO 246. Microbiology Seminar **Credits: 1.00**

Laboratory Requirement: 1-3 Credit Hours

Choose at least one of the following laboratory courses:

BIO 203. Viral Discovery **Credits: 2.00**

ISAT 203. Viral Discovery **Credits: 2.00**

BIO 204. Viral Genome and Bioinformatics **Credits: 2.00**

ISAT 204. Viral Genome and Bioinformatics **Credits: 2.00**

BIO 343L. Immunology Laboratory **Credits: 1.00**¹

BIO 346. Laboratory in Bacterial Pathogenomics **Credits: 2.00**¹

BIO 348L. Medical Microbiology Laboratory **Credits: 1.00**¹

BIO 387L. Environmental Microbiology Laboratory **Credits: 1.00**¹

BIO 484. Aquatic Microbiology **Credits: 3.00**¹

Footnote

¹ Meets one of the biology major requirements for an upper-level BIO 300-400 level laboratory course.

Microbial Requirements: 6 Credit Hours

If a student takes an elective course that is listed in both Microbial Pathogenesis and Microbial Ecology categories below, the course may only satisfy one category requirement, but not both.

Microbial Pathogenesis

Choose at least one of the following courses:

BIO 343. Immunology **Credits: 3.00**

BIO 348. Medical Microbiology **Credits: 3.00**

BIO 420. Medical Parasitology **Credits: 3.00**¹

BIO 444. Virology **Credits: 3.00**²

BIO 447. Evolution and Ecology of Infectious Disease **Credits: 3.00**²

Microbial Ecology

BIO 387. Environmental Microbiology **Credits: 3.00**

BIO 444. Virology **Credits: 3.00**²

BIO 447. Evolution and Ecology of Infectious Disease **Credits: 3.00**²

BIO 453. Microbial Ecology and Evolution **Credits: 3.00**

BIO 484. Aquatic Microbiology **Credits: 3.00**¹

Footnotes

¹ Meets one of the biology major requirements for an organismal diversity course.

² May be used to fulfill either the *Microbial Ecology* or *Microbial Pathogenesis* requirement, but not both.

Microbiology Electives: 4-6 Credit Hours

Microbiology courses from any of the above listed courses to reach 18 credit hours.

Microbiology Concentration Total: 18 Credit Hours

Neuroscience Concentration

Concentration Coordinator: George Vidal

E-mail: vidalgx@jmu.edu

The biology department offers a concentration within the biology major for students with interests in cell and molecular, systems, and behavioral aspects of the nervous system and its functionality. Students choosing a concentration in neuroscience must meet all of the requirements for the biology major in addition to the following requirements. Courses for this concentration can also satisfy biology major requirements.

Choose one: 3 Credit Hours

BIO 301. Introductory Neuroscience **Credits: 3.00**

BIO 385. Biopsychology **Credits: 3.00**

PSYC 385. Biopsychology **Credits: 3.00**

Choose one: 3-4 Credit Hours

BIO 415. Neuroanatomy and Neurogenic Communication Disorders **Credits: 3.00**

CSD 415. Neuroanatomy and Neurogenic Communication Disorders **Credits: 3.00**

BIO 445. Neurobiology **Credits: 4.00**¹

Neuroscience Concentration Electives: 9 Credit Hours

One (or more) of these must be principally a neurobiology course (BIO 375/PSYC 375, BIO 415/CSD 415, BIO 443, BIO 445, BIO 446 or BIO 448, BIO 448L, BIO 478).

BIO 316. Animal Development **Credits: 3.00**¹

BIO 375. Sensation and Perception **Credits: 3.00**

or

PSYC 375. Sensation and Perception **Credits: 3.00**

BIO 415. Neuroanatomy and Neurogenic Communication Disorders **Credits: 3.00**²

or

CSD 415. Neuroanatomy and Neurogenic Communication Disorders **Credits: 3.00**²

BIO 443. Understanding Techniques in Neuroscience **Credits: 3.00**

BIO 445. Neurobiology **Credits: 4.00**^{1,2}

BIO 446. Experimental Neurobiology **Credits: 4.00**¹

BIO 448. Developmental Neurobiology **Credits: 3.00**

BIO 448L. Developmental Neurobiology Laboratory **Credits: 1.00**¹

BIO 478. Aging and Neurodegeneration **Credits: 3.00**

BIO 480. Advanced Molecular Biology **Credits: 3.00**
BIO 480L. Advanced Molecular Biology Lab **Credits: 1.00**¹
BIO 481. Genomics **Credits: 4.00**¹
BIO 482. Human Histology **Credits: 4.00**¹

Footnotes

¹ Meets one of the biology major requirements for a laboratory/field course.

² BIO 445 and BIO 415/CSD 415: The course not taken as part of required neuroscience concentration core may be used to fulfill elective requirements.

Neuroscience Concentration Additional Information

Students should choose additional BIO courses at the 300–400 level, including a course that fulfills the organismal diversity major requirement, and are strongly encouraged to discuss their career interests with an adviser who can help select courses best suited to their needs. With prior approval from the concentration coordinator, BIO 426 and/or BIO 427 may be substituted. It is recommended that students participate in independent research (BIO 497/BIO 499A/BIO 499B/BIO 499C) with a faculty mentor.

Neuroscience Concentration Total: 15–16 Credit Hours

Recommended Schedule for Majors

First semester first year biology majors are encouraged to start with a 14–15 hour course load. This will generally include BIO 140/BIO 140L, CHEM 131/CHEM 131L, and/or a math course plus General Education. The work load will then be increased in the second semester based on the level of first semester success.

First Year

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00**¹ and
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
BIO 150. Foundations of Biology II **Credits: 3.00** and
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**
CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**¹
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
CHEM 132. General Chemistry II **Credits: 3.00**¹
CHEM 132L. General Chemistry Laboratory **Credits: 1.00**
Mathematics courses **Credits: 4.00 – 7.00**¹
General Education: Madison Foundations **Credits: 9.00 – 12.00**

Footnote

¹ Fulfills General Education: Natural World.

First Year Total: 29–35 Credit Hours

Second Year

BIO 240. Genetics **Credits: 3.00** and

BIO 240L. Genetics Laboratory **Credits: 1.00**
BIO 250. Quantitative Ecology and Evolution **Credits: 3.00** and
BIO 250L. Quantitative Ecology and Evolution Laboratory **Credits: 1.00**
CHEM 241. Organic Chemistry I **Credits: 3.00**
Mathematics course **Credits: 3.00 – 4.00**
General Education **Credits: 12.00**

One of the following courses:

CHEM 242. Organic Chemistry II **Credits: 3.00**
BIO 361. Biochemistry I **Credits: 3.00**
CHEM 361. Biochemistry I **Credits: 3.00**
CHEM 355. Geochemistry of Natural Waters **Credits: 3.00**
GEOL 355. Geochemistry of Natural Waters **Credits: 3.00**

Second Year Total: 29–30 Credit Hours

Third Year

Upper-level biology laboratory courses **Credits: 8.00**
Biology elective **Credits: 3.00 – 4.00**
General Education **Credits: 7.00**
Electives **Credits: 11.00–12.00**

Third Year Total: 30 Credit Hours

Fourth Year

Upper-level biology laboratory course **Credits: 4.00**
Biology electives **Credits: 9.00**
Physics courses **Credits: 4.00–8.00**
General Education **Credits: 3.00**
Electives **Credits: 5.00–12.00**

Fourth Year Total: 29 Credit Hours

Program Total: 120 Credit Hours

Biology Minor

Minor Adviser: Julia Stutzman

Email: stutzmjk@jmu.edu

Special Requirements

Practical hands-on experience in the field and/or laboratory is important content of laboratory-based courses. Transfer credit for courses including laboratories will only be awarded for those having skill and application content comparable to that of JMU courses. Elective biology credits applicable toward the minor are transferred as specific courses or as BIO 426 or BIO 427. Credits not applicable toward the major or minor, but applicable toward the 120-hour degree requirement, are transferred as BIO 000. A maximum of eight credit hours of first year (100) level BIO courses may be applied to the biology major or minor requirements.

Required Courses

Students completing the biology minor must earn minimum grades of "C-" in BIO 140, BIO 140L, BIO 150 and BIO 150L.

Students choosing to minor in biology must complete the following courses:

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

BIO 150. Foundations of Biology II **Credits: 3.00 and**
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

BIO 240. Genetics **Credits: 3.00 and**
BIO 240L. Genetics Laboratory **Credits: 1.00**

BIO 250. Quantitative Ecology and Evolution **Credits: 3.00 and**
BIO 250L. Quantitative Ecology and Evolution Laboratory **Credits: 1.00**

Biology elective (300-level and above) *Credits: 3.00-4.00*

Total: 19-20 Credit Hours

Biology, B.A.

Program Description

The department offers a four-year B.A. degree program for a major in biology and for a major in biology qualifying for the Secondary Collegiate Professional License and is distinguished from the four-year B.S by two key university requirements (the completion of an intermediate level foreign language and three credit hours in philosophy) and several key program requirements (a capstone experience, writing courses, and required Integrated Science and Technology and Anthropology courses). Students may not receive dual credit toward the biology major for 300- and 400-level BIO courses that are applied toward the biotechnology major.

Biology majors seeking a BA must complete 36 credit hours of biology courses including 20 credit hours of biology electives, plus a capstone course (3 cr. hr., which may or may not be BIO credit). Specific requirements include 16 credit hours of four core courses (BIO 140/BIO 140L, BIO 150/BIO 150L, BIO 240/BIO 240L and BIO 250/BIO 250L), at least two upper-division laboratory courses, and one course from a list of courses with an emphasis on organismal diversity. In addition, Biology BA majors must complete a set of required cognate courses in chemistry, mathematics/statistics, writing, ISAT and anthropology. Students are encouraged to participate in independent research with a faculty mentor and are required to participate in a capstone experience. Credits earned doing research in biology will count toward the biology major, but some restrictions apply.

When requested, senior biology majors are expected to participate in program assessment test activities as a graduation requirement. Assessment information helps the department modify the curriculum to meet student needs.

Special Requirements

In order for BIO 270/BIO 270L and BIO 290/BIO 290L credit to be transferred, both semesters of an Anatomy and Physiology course (A&P I and A&P II) must be completed with a minimum grade of "C" from the same institution. A single semester of either of these sequences transfers as BIO 000. Only BIO 290/BIO 290L can be applied toward biology major electives; BIO 270/BIO 270L does not apply toward biology electives.

Practical hands-on experience in the field and/or laboratory is important content of laboratory-based courses. Transfer credit for courses including laboratories will only be awarded for those having skill and application content comparable to that of JMU courses. Elective biology credits applicable toward the major or minor are transferred as specific courses or as BIO 200, BIO 426 or BIO 427. Credits not applicable toward the major or minor, but applicable toward the 120-hour degree requirement, are transferred as BIO 000. A maximum of eight credit hours of first year (100) level BIO courses may be applied to the biology major or minor requirements.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	*41
Foreign Language requirements ²	0-14
Philosophy requirement (in addition to General Education courses)	3
Biology Major and Capstone ³ requirements	36-39
Cognate requirements	26
University Electives	7-24
Total	*120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some requirements are fulfilled by courses within the major. It is strongly recommended that students work with their advisers to identify strategic selections for their general education requirements. *Cluster 3 (10 credit hours) is entirely covered by the Biology B.A. major requirements, and therefore those credits are accounted for only once in the 120 credit hour total.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232), or by placing out of that language through the **Department of Foreign Language, Literatures and Cultures'** placement test.

³If the capstone experience is comprised of BIO credit, this can also count toward the 20 credits of BIO electives, reducing the total number of required courses.

Major Requirements

Core Requirements: 16 Credit Hours

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
BIO 150. Foundations of Biology II **Credits: 3.00 and**
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**
BIO 240. Genetics **Credits: 3.00 and**
BIO 240L. Genetics Laboratory **Credits: 1.00**
BIO 250. Quantitative Ecology and Evolution **Credits: 3.00 and**
BIO 250L. Quantitative Ecology and Evolution Laboratory **Credits: 1.00**

Additional Biology Course Requirements: 20 Credit Hours

Students pursuing the B.A. in biology major must complete at least 20 credit hours of approved biology courses and at least 14 of these must be at the 300 and 400 levels. Up to 6 credit hours of 200 level BIO courses may count towards the 20 credit hour requirement, excluding BIO 270/BIO 270L. At least one BIO course must be from the list of BIO 300-400 level organismal diversity courses, and two, BIO 300-400 level courses must be from the laboratory list. Courses in both organismal diversity and laboratory lists may count for both requirements. Three credits of independent research (BIO 497 and/or BIO 499A/BIO 499B/BIO 499C) may be used for one, but only one, of the laboratory courses. Students completing the biology major must earn a minimum grade of "C-" in BIO 140, BIO 140L, BIO 150, BIO 150L, CHEM 131, CHEM 131L and CHEM 132.

Choose at least one organismal diversity course from the following list:

BIO 310. Marine Biology **Credits: 3.00**
BIO 320. Comparative Anatomy of Vertebrates **Credits: 4.00**
BIO 340. Morphology and Anatomy of Vascular Plants **Credits: 4.00**
BIO 357. Galápagos Islands: Biodiversity and Conservation **Credits: 3.00**
BIO 360. Plant Biology **Credits: 3.00**
BIO 364. Human Uses of Plants **Credits: 3.00**
BIO 386. Field Botany **Credits: 4.00**
BIO 402. Forest Ecology **Credits: 4.00**
BIO 405. Vertebrate Paleontology **Credits: 3.00**
GEOL 405. Vertebrate Paleontology **Credits: 3.00**
BIO 412. Mammalogy **Credits: 4.00**
BIO 420. Medical Parasitology **Credits: 3.00**
BIO 430. Ornithology: Research and Current Advances **Credits: 4.00**
BIO 449. Insect Ecology **Credits: 4.00**
BIO 469. Biological Illustration **Credits: 3.00**
BIO 484. Aquatic Microbiology **Credits: 3.00**
BIO 486. Systematics of Vascular Plants **Credits: 4.00**

Choose at least two 300-400 level laboratory courses from the following list:

BIO 318. Experimental Vertebrate Development **Credits: 2.00**
BIO 320. Comparative Anatomy of Vertebrates **Credits: 4.00**
BIO 340. Morphology and Anatomy of Vascular Plants **Credits: 4.00**
BIO 343L. Immunology Laboratory **Credits: 1.00**
BIO 346. Laboratory in Bacterial Pathogenomics **Credits: 2.00**
BIO 348L. Medical Microbiology Laboratory **Credits: 1.00**
BIO 350. Paleobiology **Credits: 4.00**
BIO 354. Global Climate Change and Life: Ecological and Biological Impacts of Climate Variability **Credits: 4.00**
BIO 364L. Laboratory in Human Uses of Plants **Credits: 1.00**
BIO 360L. Plant Biology Laboratory **Credits: 1.00**
BIO 370. Animal Physiology **Credits: 4.00**
BIO 386. Field Botany **Credits: 4.00**
BIO 387L. Environmental Microbiology Laboratory **Credits: 1.00**
BIO 400. Geology and Ecology of the Bahamas **Credits: 3.00**
GEOL 400. Geology and Ecology of the Bahamas **Credits: 3.00**
BIO 402. Forest Ecology **Credits: 4.00**
BIO 410. Advanced Human Anatomy **Credits: 3.00**
BIO 412. Mammalogy **Credits: 4.00**
BIO 427. Topics in Biology with Laboratory **Credits: 1.00 - 4.00**
BIO 430. Ornithology: Research and Current Advances **Credits: 4.00**
BIO 432. Light Microscopy **Credits: 4.00**
BIO 445. Neurobiology **Credits: 4.00**
BIO 446. Experimental Neurobiology **Credits: 4.00**
BIO 448L. Developmental Neurobiology Laboratory **Credits: 1.00**
BIO 449. Insect Ecology **Credits: 4.00**
BIO 452. Population Ecology **Credits: 4.00**
BIO 455. Plant Physiology **Credits: 4.00**
BIO 457. Biological Applications of Geographic Information Systems **Credits: 4.00**
BIO 459. Freshwater Ecology **Credits: 4.00**
BIO 460. Plant Biotechnology **Credits: 4.00**
BIO 481. Genomics **Credits: 4.00**
BIO 482. Human Histology **Credits: 4.00**
BIO 483. Bioinformatics **Credits: 4.00**
BIO 484. Aquatic Microbiology **Credits: 3.00**
BIO 486. Systematics of Vascular Plants **Credits: 4.00**
BIO 480L. Advanced Molecular Biology Lab **Credits: 1.00**
BIO 490. Mechanics of Animal Movement **Credits: 4.00**

Additional Information

Only one Topics in Biology (BIO 426/BIO 427) may fulfill one of the laboratory course and/or organismal requirements. These course numbers can be repeated with a change in topic, but only 12 credits from BIO 426/BIO 427 can be applied toward the 36-hour biology course requirement.

When choosing additional biology courses to complete the 36 credit hour requirement, students are strongly encouraged to discuss their career interests with an adviser who can help select courses best suited to their needs. Students are encouraged to participate in independent research and teaching courses with a faculty mentor, though a maximum of eight credits of BIO

492, BIO 493, BIO 494, BIO 495, BIO 496, BIO 497, BIO 499A/BIO 499B/BIO 499C and ISCI 450 can be counted toward the biology major.

Capstone Requirement: 3 Credit Hours

Students in the Biology B.A. are required to complete a Capstone experience. The Capstone experience will be decided upon with the input of the student's faculty adviser. In addition to the courses listed below, capstone experiences may include a study abroad experience, a JMU X-Labs class, or other class as approved by the adviser.¹

BIO 493. Pre-Veterinary Student Internship **Credits: 2.00**

BIO 494. Internship in Biology **Credits: 1.00 – 2.00**

BIO 497. Biological Research **Credits: 1.00**

BIO 499A. Senior Project **Credits: 2.00**

BIO 499B. Senior Project **Credits: 2.00**

BIO 499C. Senior Project **Credits: 2.00**

ENVT 400. Capstone Seminar in Environmental Problem Solving **Credits: 3.00**

HON 499A, B, C. Honors Senior Project **Credits: 1.00, 3.00 or 2.00**

Total Biology Requirements: 36-39 Credit Hours

Footnote

¹ If the capstone course is a BIO course, it may be double-counted toward the 20 hours of biology electives, which accounts for the range of 36-39 biology major credit hours.

Cognate Requirements

The following five groups of support courses are required for the biology major. Consult your academic adviser about which courses are appropriate.

Chemistry Cognate Requirements: 8 Credit Hours

Complete all of the following: 8 Credit Hours

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

CHEM 132. General Chemistry II **Credits: 3.00**

CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

Note

Additional courses in chemistry (i.e., CHEM 241. Organic Chemistry I, CHEM 242. Organic Chemistry II, CHEM 353. Environmental Chemistry, CHEM 354. Environmental Chemistry Field Camp, CHEM 355. Geochemistry of Natural Waters, and/or BIO 361. Biochemistry I) are all valuable courses toward careers in biology, and should be discussed with an adviser as elective options based on a student's career interests.

Mathematics and Statistics Cognate Requirements. 6 Credits.

Choose one in each of the following sets of courses. Mathematics and Statistics beyond the minimum requirement is desirable in many areas of biology. Consult your adviser about which courses are appropriate.

Choose one of the following introductory statistics courses: 3 Credit Hours.

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**

Choose one of the following additional mathematics courses: 3 Credit Hours

MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**

MATH 235. Calculus I [C3QR] **Credits: 4.00**

MATH 268. Data Analysis and Visualization **Credits: 3.00**

MATH 309. SAS Programming and Data Management **Credits: 3.00**

MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**

MATH 322. Applied Linear Regression **Credits: 3.00**

MATH 324. Applied Nonparametric Statistics **Credits: 3.00**

MATH 325. Survey Sampling Methods **Credits: 3.00**

MATH 327. Categorical Data Analysis **Credits: 3.00**

MATH 354. Introduction to Biometrics **Credits: 4.00**

MATH 368. Statistical Computing **Credits: 3.00**

BIO 454. Introduction to Biometrics **Credits: 4.00**

DATA 200. Introduction to Data **Credits: 3.00**

Transdisciplinary Cognate Requirements: 12 Credit Hours

Additional recommended courses will depend on the career goals of the student and should be discussed with the adviser.

Complete the following required ANTH and ISAT Cognate courses: 6 Credit Hours

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**

ISAT 231. Political Economy of Technology and Science **Credits: 3.00**

Choose two Elective Cognate courses from the following: 6 Credit Hours

ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**

or ISAT 320. Fundamentals of Environmental Science and Technology I **Credits: 4.00**

SCOM 465. Rhetoric of Environmental Science and Technology **Credits: 3.00**

WRTC 358. Writing About Science and Technology **Credits: 3.00**

or WRTC 416. Rhetoric of Environmental Science and Technology **Credits: 3.00**

Total Cognate Requirements: 26 Credit Hours Concentrations

Ecology and Environmental Biology Concentration

The biology department offers a concentration within the biology major for students with interest in ecology, field biology, natural resources, environmental biology, conservation biology, evolution, animal behavior and organismal biology. Students choosing a concentration in ecology and environmental biology must meet all of the requirements for the biology major as well as the following additional requirements. Courses for this concentration can also satisfy biology major requirements.

Students must complete at least 20 credit hours from the following list.

With prior approval from the concentration coordinator, BIO 426 and/or BIO 427 may be substituted. Students are strongly encouraged to discuss their career interests with an adviser who can help select courses best suited to their needs. In addition to the courses listed below, a maximum of eight credits of BIO 495, BIO 496, BIO 497 and BIO 499A/BIO 499B/BIO 499C can be counted toward the EEB concentration.

- BIO 245. General Microbiology **Credits: 3.00** ^{1,2} *and*
- BIO 245L. General Microbiology Laboratory **Credits: 1.00**
- BIO 310. Marine Biology **Credits: 3.00** ¹
- BIO 320. Comparative Anatomy of Vertebrates **Credits: 4.00** ^{1,2}
- BIO 340. Morphology and Anatomy of Vascular Plants **Credits: 4.00** ^{1,2}
- BIO 342. Mathematical Models in Biology **Credits: 3.00**
- or
- MATH 342. Mathematical Models in Biology **Credits: 3.00**
- BIO 354. Global Climate Change and Life: Ecological and Biological Impacts of Climate Variability **Credits: 4.00**
- BIO 357. Galápagos Islands: Biodiversity and Conservation **Credits: 3.00** ¹
- BIO 360. Plant Biology **Credits: 3.00** ¹
- BIO 370. Animal Physiology **Credits: 4.00** ²
- BIO 386. Field Botany **Credits: 4.00** ^{1,2}
- BIO 387. Environmental Microbiology **Credits: 3.00**
- BIO 387L. Environmental Microbiology Laboratory **Credits: 1.00** ²
- BIO 395. Comparative Animal Behavior **Credits: 3.00**
- or
- PSYC 395. Comparative Animal Behavior **Credits: 3.00**
- BIO 400. Geology and Ecology of the Bahamas **Credits: 3.00**
- or
- GEOL 400. Geology and Ecology of the Bahamas **Credits: 3.00**
- BIO 402. Forest Ecology **Credits: 4.00** ²
- BIO 404. Evolutionary Analysis **Credits: 3.00**
- BIO 405. Vertebrate Paleontology **Credits: 3.00**
- or
- GEOL 405. Vertebrate Paleontology **Credits: 3.00**
- BIO 412. Mammalogy **Credits: 4.00** ^{1,2}
- BIO 418. Conservation Biology **Credits: 3.00**
- BIO 430. Ornithology: Research and Current Advances **Credits: 4.00** ^{1,2}
- BIO 447. Evolution and Ecology of Infectious Disease **Credits: 3.00**
- BIO 449. Insect Ecology **Credits: 4.00** ^{1,2}
- BIO 451. Current Topics in Human Development and Evolution **Credits: 3.00**
- BIO 452. Population Ecology **Credits: 4.00** ²
- BIO 453. Microbial Ecology and Evolution **Credits: 3.00**
- BIO 454. Introduction to Biometrics **Credits: 4.00**
- BIO 455. Plant Physiology **Credits: 4.00** ²
- BIO 457. Biological Applications of Geographic Information Systems **Credits: 4.00** ²

BIO 459. Freshwater Ecology **Credits: 4.00** ²

BIO 484. Aquatic Microbiology **Credits: 3.00** ^{1,2}

BIO 486. Systematics of Vascular Plants **Credits: 4.00** ^{1,2}

Footnotes

¹ Meets the biology major requirement for an organismal diversity course.

² Meets one of the biology major requirements for laboratory/field courses.

Students must take two additional cognate courses:

Choose one Statistics course: 3–4 Credit Hours

MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**

MATH 322. Applied Linear Regression **Credits: 3.00**

MATH 324. Applied Nonparametric Statistics **Credits: 3.00**

MATH 325. Survey Sampling Methods **Credits: 3.00**

BIO 454. Introduction to Biometrics **Credits: 4.00**

Choose one Geographic Information Systems course: 3–4 Credit Hours

GEOG 215. Introduction to Geographic Information Science and Cartography **Credits: 3.00**

BIO 457. Biological Applications of Geographic Information Systems **Credits: 4.00**

Ecology and Environmental Biology Concentration

Additional Information

It is highly recommended that students take additional upper-level degree elective courses in geography/GIS (such as GEOG 466 or GEOG 467) and in statistics (such as MATH 322 or MATH 324). Students should consult with their adviser about which courses are appropriate.

Ecology and Environmental Biology Concentration

Total: 26–28 Credit Hours

Microbiology Concentration

Concentration Coordinator: Steve Cresawn

E-mail: cresawsg@jmu.edu

The biology department offers a concentration within the biology major for students with interest in bacteriology, virology, immunology, parasitology and infectious disease. Students choosing a concentration in microbiology must meet all the requirements for the biology major, including the following specific requirements.

Complete a total of at least 18 credit hours from the following courses.

General Microbiology Requirements: 5 Credit Hours

Take all of the following courses:

BIO 245. General Microbiology **Credits: 3.00**

BIO 245L. General Microbiology Laboratory **Credits: 1.00**

BIO 246. Microbiology Seminar **Credits: 1.00**

Laboratory Requirement: 1–3 Credit Hours

Choose at least one of the following laboratory courses:

BIO 203. Viral Discovery **Credits: 2.00**

ISAT 203. Viral Discovery **Credits: 2.00**

BIO 204. Viral Genome and Bioinformatics **Credits: 2.00**
 ISAT 204. Viral Genome and Bioinformatics **Credits: 2.00**
 BIO 343L. Immunology Laboratory **Credits: 1.00**¹
 BIO 346. Laboratory in Bacterial Pathogenomics **Credits: 2.00**¹
 BIO 348L. Medical Microbiology Laboratory **Credits: 1.00**¹
 BIO 387L. Environmental Microbiology Laboratory **Credits: 1.00**¹
 BIO 484. Aquatic Microbiology **Credits: 3.00**¹

Footnote

¹ Meets one of the biology major requirements for an upper-level BIO 300-400 level laboratory course.

Microbial Requirements: 6 Credit Hours

If a student takes an elective course that is listed in both Microbial Pathogenesis and Microbial Ecology categories below, the course may only satisfy one category requirement, but not both.

Microbial Pathogenesis

Choose at least one of the following courses:

BIO 343. Immunology **Credits: 3.00**
 BIO 348. Medical Microbiology **Credits: 3.00**
 BIO 420. Medical Parasitology **Credits: 3.00**¹
 BIO 444. Virology **Credits: 3.00**²
 BIO 447. Evolution and Ecology of Infectious Disease **Credits: 3.00**²

Microbial Ecology

BIO 387. Environmental Microbiology **Credits: 3.00**
 BIO 444. Virology **Credits: 3.00**²
 BIO 447. Evolution and Ecology of Infectious Disease **Credits: 3.00**²
 BIO 453. Microbial Ecology and Evolution **Credits: 3.00**
 BIO 484. Aquatic Microbiology **Credits: 3.00**¹

Footnotes

¹ Meets one of the biology major requirements for an organismal diversity course.

² May be used to fulfill either the *Microbial Ecology* or *Microbial Pathogenesis* requirement, but not both.

Microbiology Electives: 4-6 Credit Hours

Microbiology courses from any of the above listed courses to reach 18 credit hours.

Microbiology Concentration Total: 18 Credit Hours

Neuroscience Concentration

Concentration Coordinator: George Vidal

E-mail: vidalgx@jmu.edu

The biology department offers a concentration within the biology major for students with interests in cell and molecular, systems, and behavioral aspects of the nervous system and its functionality. Students choosing a concentration in neuroscience must meet all of the requirements for the biology major in addition to the following requirements. Courses for this concentration can also satisfy biology major requirements.

Choose one: 3 Credit Hours

BIO 301. Introductory Neuroscience **Credits: 3.00**

BIO 385. Biopsychology **Credits: 3.00**
 PSYC 385. Biopsychology **Credits: 3.00**

Choose one: 3-4 Credit Hours

BIO 415. Neuroanatomy and Neurogenic Communication Disorders **Credits: 3.00**
 CSD 415. Neuroanatomy and Neurogenic Communication Disorders **Credits: 3.00**
 BIO 445. Neurobiology **Credits: 4.00**¹

Neuroscience Concentration Electives: 9 Credit Hours

One (or more) of these must be principally a neurobiology course (BIO 375/PSYC 375, BIO 415/CSD 415, BIO 443, BIO 445, BIO 446 or BIO 448, BIO 448L, BIO 478).

BIO 316. Animal Development **Credits: 3.00**¹
 BIO 375. Sensation and Perception **Credits: 3.00**
 or
 PSYC 375. Sensation and Perception **Credits: 3.00**
 BIO 415. Neuroanatomy and Neurogenic Communication Disorders **Credits: 3.00**²
 or
 CSD 415. Neuroanatomy and Neurogenic Communication Disorders **Credits: 3.00**²
 BIO 443. Understanding Techniques in Neuroscience **Credits: 3.00**
 BIO 445. Neurobiology **Credits: 4.00**^{1,2}
 BIO 446. Experimental Neurobiology **Credits: 4.00**¹
 BIO 448. Developmental Neurobiology **Credits: 3.00**
 BIO 448L. Developmental Neurobiology Laboratory **Credits: 1.00**¹
 BIO 478. Aging and Neurodegeneration **Credits: 3.00**
 BIO 480. Advanced Molecular Biology **Credits: 3.00**
 BIO 480L. Advanced Molecular Biology Lab **Credits: 1.00**¹
 BIO 481. Genomics **Credits: 4.00**¹
 BIO 482. Human Histology **Credits: 4.00**¹

Footnotes

¹ Meets one of the biology major requirements for a laboratory/field course.

² BIO 445 and BIO 415/CSD 415: The course not taken as part of required neuroscience concentration core may be used to fulfill elective requirements.

Neuroscience Concentration Additional Information

Students should choose additional BIO courses at the 300-400 level, including a course that fulfills the organismal diversity major requirement, and are strongly encouraged to discuss their career interests with an adviser who can help select courses best suited to their needs. With prior approval from the concentration coordinator, BIO 426 and/or BIO 427 may be substituted. It is recommended that students participate in independent research (BIO 497/BIO 499A/BIO 499B/BIO 499C) with a faculty mentor.

Neuroscience Concentration Total: 15-16 Credit Hours

Recommended Schedule for Majors

First semester first year biology majors are encouraged to start with a 14-15 hour course load. This will generally include BIO 140/BIO 140L, CHEM 131 and CHEM 131L, and/or a math course plus General Education. The work load will then be increased in the second semester based on the level of first semester success.

First Year

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00**¹ and
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
BIO 150. Foundations of Biology II **Credits: 3.00** and
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**
CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**¹
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
CHEM 132. General Chemistry II **Credits: 3.00**¹
CHEM 132L. General Chemistry Laboratory **Credits: 1.00**
Mathematics course (General Education: The Natural World) **Credits: 3.00**
Madison Foundations (including WRTC 103) **Credits: 9.00**

First Year Total: 28 Credit Hours

Second Year

BIO 240. Genetics **Credits: 3.00** and
BIO 240L. Genetics Laboratory **Credits: 1.00**
BIO 250. Quantitative Ecology and Evolution **Credits: 3.00** and
BIO 250L. Quantitative Ecology and Evolution Laboratory **Credits: 1.00**
Mathematics Course (fulfills General Education: The Natural
World) **Credits: 3.00**
B.A. degree requirements (foreign language, philosophy) and/or university
electives **Credits: 12.00**
General Education (including ANTH 195. Cultural Anthropology
[C4GE]) **Credits: 9.00**

Second Year Total: 32 Credit Hours

Third Year

BIO electives, to include a BIO 300-400 level lab and an organismal diversity
course, **Credits: 10.00**
Transdisciplinary Cognates, **Credits: 6.00**
B.A. degree requirements (foreign language) and/or university
electives **Credits: 7.00**
General Education **Credits: 7.00**

Third Year Total: 30 Credit Hours

Fourth Year

BIO electives, to include a BIO 300-400 level laboratory **Credits: 7.00-10.00** (7.00 if Capstone is a BIO course)
Capstone experience **Credits: 3.00**
Transdisciplinary Cognates **Credits: 3.00**
General Education and university electives **Credits: 14.00-17.00**

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Credit by Examination

When evidence of sufficient background or preparation is presented, the Department of Biology offers credit by examination in many of its non-lab courses at the discretion of the course instructor or coordinator. Students seeking such credit should make arrangements with the course instructor or coordinator and obtain approval of the department head.

Teaching Licensure

Biology majors need courses in physics, geology and organic chemistry for many science education positions.

In addition to the general education and academic major requirements, biology majors desiring secondary teacher licensure must be admitted to teacher education, complete the pre-professional program in secondary education at the undergraduate level and complete the graduate level Master of Arts in Teaching degree.

It is critical that students seeking licensure consult regularly with both their education adviser and their major adviser to support their progression through the programs. For a full description of the program in secondary teaching, refer to the Department of Middle, Secondary and Mathematics Education in addition to the College of Education.

Department of Chemistry and Biochemistry

Linette M. Watkins, **Department Head**

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Associate Professors

A. Baber, C. Berndsen, O. Kokhan, S. Lewis, I. Sumner

Assistant Professors

L. Caesar, G. Peters

Lecturers

D. Blumling, K. Funck, C. Hollinsed, O. Judd, Q. Liu, B. Long, D. Wilson

Mission Statement

The Department of Chemistry and Biochemistry offers the B.S. degree for a major in chemistry, with concentrations that meet the American Chemical Society Accredited Programs requirements for programs in biochemistry,

materials chemistry and in chemistry/chemical education. In addition, the department offers a B.S. degree in chemistry with a major in biophysical chemistry. It also offers minors in chemistry, biochemistry and molecular biology, and materials science. The programs are designed to provide the theoretical and practical instruction in chemistry and related areas to prepare students for careers in chemistry, biochemistry, medicine, dentistry, paramedical areas, forensic sciences, chemical engineering and other technology-based areas. The department also recognizes its responsibility to provide courses for non-chemistry majors who need a basic understanding of the principles of chemistry either for their chosen major or their general education.

Career Opportunities

Graduate school in chemistry, biochemistry or related areas (ACS Certified Degrees preferred)
Professional employment as a chemist or biochemist (ACS Certified Degrees preferred)
Professional school (medical, dental, veterinary, pharmacy, business and law)
Chemical engineering
Environmental science
Food or fragrance chemistry
Forensic science
Immunology
Industrial hygiene
Pharmaceutical chemistry
Pharmacology
Production supervision
Quality control
Research assistant
Science educator
Scientific writing
Some forms of development work
Technical library science
Toxicology
Other fields where critical problem solving and technical communication skills are valued

Co-curricular Activities and Organizations

American Chemical Society Student Affiliate Chapter
Alpha Chi Sigma Professional Fraternity (Coed)
Iota Sigma Pi
National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE)
Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)
Pre-Professional Health clubs and societies
Summer and academic year research
Attend and present at local, regional, or national professional conferences
Employment as a learning assistant
Science outreach in the local schools and community
Advocacy for diversity, equity and inclusion in STEM

Teaching Licensure

There are two paths to licensure as a high school teacher (link). One is a 4-year path with a double major in Chemistry Education and Secondary

Education. A more common option is a 5-year path with the General Program in Chemistry with a Secondary Education Minor, and adding a 5th year Master of Arts in Teaching (M.A.T.).

It is critical that students seeking licensure consult regularly with both their education adviser and their major adviser to support their progression through the programs. For a full description of the program in secondary teaching, refer to the Middle, Secondary and Mathematics Education, Department of, in addition to the College of Education/Professional Education Unit section of the catalog.

Chemistry, Biophysical Chemistry Major, B.S.

Program Description

Students in this program receive a Bachelor of Science degree in chemistry with a major in biophysical chemistry.

Degree and Major Requirements

Degree Requirements	Credits Hours
General Education ¹	41
Quantitative requirement (in addition to General Education) ²	3
Scientific Literacy requirement (in addition to General Education) ²	3-4
Major requirements and electives	85-87
Total	131

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The quantitative and scientific literacy requirements for this degree are met by courses required for the major. As a result, the total credit hours earned for the degree will be 131.

Major Requirements

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
CHEM 132. General Chemistry II **Credits: 3.00**
CHEM 135L. Special General Chemistry Laboratory I **Credits: 1.00** ¹
CHEM 136L. Special General Chemistry Laboratory II **Credits: 2.00** ¹
CHEM 270. Inorganic Chemistry I **Credits: 3.00**
CHEM 241. Organic Chemistry I **Credits: 3.00**
CHEM 242. Organic Chemistry II **Credits: 3.00**
CHEM 287L. Integrated Inorganic/Organic Laboratory I **Credits: 2.00** ²

CHEM 288L. Integrated Inorganic/Organic Laboratory II **Credits: 2.00** ²
 CHEM 351. Analytical Chemistry **Credits: 4.00**
 CHEM 361. Biochemistry I **Credits: 3.00**
 CHEM 363. Biophysical Chemistry **Credits: 3.00** (Literature & Seminar included)
 CHEM 367L. Biochemistry Laboratory **Credits: 2.00** (fall)
 CHEM 368L. Biophysical Chemistry Laboratory **Credits: 2.00** (spring)
 CHEM 331. Physical Chemistry I **Credits: 3.00**
 CHEM 432. Physical Chemistry II **Credits: 3.00**
 CHEM 336L. Applied Physical Chemistry Laboratory **Credits: 2.00**
 BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
 BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

BIO 240. Genetics **Credits: 3.00 and**
 BIO 240L. Genetics Laboratory **Credits: 1.00**

BIO 480. Advanced Molecular Biology **Credits: 3.00**

Physics and Mathematics Background Courses: 24 Credit Hours

MATH 235. Calculus I [C3QR] **Credits: 4.00**
 MATH 236. Calculus II **Credits: 4.00**
 MATH 237. Calculus III **Credits: 4.00**

or

MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**
 MATH 232. Calculus with Functions II **Credits: 3.00**
 MATH 236. Calculus II **4.00**
 MATH 237. Calculus III **4.00**

MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**
 PHYS 240. University Physics I [C3PP] **Credits: 3.00**
 PHYS 250. University Physics II **Credits: 3.00**
 PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00**
 PHYS 250L. University Physics Laboratory II **Credits: 1.00**

Choose at least two of the following electives: 6-8 Credit Hours

CHEM 375. An Introduction to Materials Science **Credits: 3.00**
 or
 PHYS 375. An Introduction to Materials Science **Credits: 3.00**
 or
 MATS 375. An Introduction to Materials Science **Credits: 3.00**

CHEM 362. Biochemistry II **Credits: 3.00**
 CHEM 440. Intermediate Organic Chemistry **Credits: 3.00**
 CHEM 445. Polymer Chemistry **Credits: 3.00**
 CHEM 470. Inorganic Chemistry II **Credits: 3.00**
 BIO 324. Human Genetics **Credits: 3.00**
 BIO 445. Neurobiology **Credits: 4.00**
 PHYS 260. University Physics III **Credits: 3.00**

PHYS 270. Modern Physics **Credits: 3.00 and**

PHYS 270L. Modern Physics Laboratory **Credits: 1.00**

PHYS 326. Biophysics **Credits: 3.00**

PHYS 381. Materials Characterization (Lecture/Lab) **Credits: 3.00**

BIO 342. Mathematical Models in Biology **Credits: 3.00**

or

MATH 342. Mathematical Models in Biology **Credits: 3.00**

CHEM 390. Problems in Chemistry **Credits: 1.00-3.00**

CHEM 497. Undergraduate Chemical Research **Credits: 1.00 - 3.00**

or

CHEM 499A. Honors **Credits: 1.00**

BIO 494. Internship in Biology **Credits: 1.00 - 2.00**

or

BIO 497. Biological Research **Credits: 1.00**

PHYS 398. Independent Study in Physics or Astronomy **Credits: 1.00 - 3.00**

or

PHYS 498R. Undergraduate Research in Physics or Astronomy **Credits: 1.00 - 4.00**

or

PHYS 499. Honors **Credits: 1.00 - 3.00**

MATH 497. Undergraduate Research **Credits: 1.00 - 4.00**

or

MATH 498. Independent Study

or

MATH 499A/MATH 499B/MATH 499C

ANY 300-400 level CHEM, PHYS or MATH course pre-approved by adviser

Footnotes

¹ CHEM 131L-CHEM 132L may be substituted.

² CHEM 242L may be substituted.

Major Requirements Total: 85-87 Credit Hours

Recommended Schedule for Majors

First Year

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**

CHEM 132. General Chemistry II **Credits: 3.00**

CHEM 135L. Special General Chemistry Laboratory I **Credits: 1.00**

CHEM 136L. Special General Chemistry Laboratory II **Credits: 2.00**

or

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

MATH 235. Calculus I [C3QR] **Credits: 4.00**
MATH 236. Calculus II **Credits: 4.00**
General Education courses or electives *10 Credit Hours*

Total: 30-31 Credit Hours

Second Year

CHEM 241. Organic Chemistry I **Credits: 3.00**
CHEM 242. Organic Chemistry II **Credits: 3.00**
CHEM 270. Inorganic Chemistry I **Credits: 3.00**
CHEM 287L. Integrated Inorganic/Organic Laboratory I **Credits: 2.00**
CHEM 288L. Integrated Inorganic/Organic Laboratory II **Credits: 2.00**

BIO 240. Genetics **Credits: 3.00 and**
BIO 240L. Genetics Laboratory **Credits: 1.00**

MATH 237. Calculus III **Credits: 4.00**
PHYS 240. University Physics I [C3PP] **Credits: 3.00**
PHYS 250. University Physics II **Credits: 3.00**
PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00**
PHYS 250L. University Physics Laboratory II **Credits: 1.00**
General Education courses or electives *3 Credit Hours*

Total: 32 Credit Hours

Third Year

CHEM 331. Physical Chemistry I **Credits: 3.00**
CHEM 336L. Applied Physical Chemistry Laboratory **Credits: 2.00**
CHEM 351. Analytical Chemistry **Credits: 4.00**
CHEM 361. Biochemistry I **Credits: 3.00**
MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**
General Education courses or electives *14 Credit Hours*

Total: 30 Credit Hours

Fourth Year:

CHEM 363. Biophysical Chemistry **Credits: 3.00**
CHEM 367L. Biochemistry Laboratory **Credits: 2.00**
CHEM 368L. Biophysical Chemistry Laboratory **Credits: 2.00**
CHEM 432. Physical Chemistry II **Credits: 3.00**
BIO 480. Advanced Molecular Biology **Credits: 3.00**
General Education courses or electives *12 Credit Hours*

Total: 26 Credit Hours

Program Total: 131 Credit Hours

Chemistry Minor

The requirements for a minor in chemistry are 24 credit hours in chemistry, distributed as follows:

Courses

General Chemistry 8 Credit Hours

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
CHEM 132. General Chemistry II **Credits: 3.00**
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

Organic Chemistry: One or two lectures and corresponding lab 4-8 Credit Hours

CHEM 241. Organic Chemistry I **Credits: 3.00 and**
CHEM 241L. Concepts of Organic Chemistry Laboratory **Credits: 1.00**

or

CHEM 241. Organic Chemistry I **Credits: 3.00 and**
CHEM 242. Organic Chemistry II **Credits: 3.00 and**
CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**

Physical Chemistry: One lecture and corresponding lab 5 Credit Hours

CHEM 331. Physical Chemistry I **Credits: 3.00 and**
CHEM 336L. Applied Physical Chemistry Laboratory **Credits: 2.00**
or
CHEM 432. Physical Chemistry II **Credits: 3.00 and**
CHEM 438L. Physical Chemistry Laboratory **Credits: 2.00**

Analytical Chemistry 4 Credit Hours

CHEM 351. Analytical Chemistry **Credits: 4.00**

An approved three-credit CHEM elective

Total: 24 Credit Hours

Additional Information

In order to complete this minor, prerequisite courses in mathematics and physics are required. These courses collectively fulfill the nine-credit approved technical elective package for the Bachelor of Science in Engineering.

Chemistry, Chemistry Major, B.S.

Program Description

The Department of Chemistry and Biochemistry offers the B.S. degree for a major in chemistry, with concentrations that meet the American Chemical Society Accredited Programs requirements. The programs are designed to provide the theoretical and practical instruction in chemistry and related areas to prepare students for careers in chemistry, biochemistry, medicine, dentistry, paramedical areas, forensic sciences, chemical engineering and other technology-based areas.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement (in addition to General Education) ²	3
Scientific Literacy requirement (in addition to General Education) ²	3-4
Major requirements	34
Cognate requirements	16-18
Electives	20-23
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The quantitative and scientific literacy requirements are met by courses required in the major.

Major Requirements

Core Requirements for all concentrations.

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
 CHEM 132. General Chemistry II **Credits: 3.00**
 CHEM 135L. Special General Chemistry Laboratory I **Credits: 1.00**¹
 CHEM 136L. Special General Chemistry Laboratory II **Credits: 2.00**¹
 CHEM 241. Organic Chemistry I **Credits: 3.00**
 CHEM 242. Organic Chemistry II **Credits: 3.00**
 CHEM 270. Inorganic Chemistry I **Credits: 3.00**
 CHEM 287L. Integrated Inorganic/Organic Laboratory I **Credits: 2.00**
 CHEM 288L. Integrated Inorganic/Organic Laboratory II **Credits: 2.00**
 CHEM 331. Physical Chemistry I **Credits: 3.00**
 CHEM 351. Analytical Chemistry **Credits: 4.00**
 CHEM 361. Biochemistry I **Credits: 3.00**
 CHEM 481. Literature and Seminar I **Credits: 1.00**
 CHEM 482. Literature and Seminar II **Credits: 1.00**

Major Requirements Total: 34 Credit Hours

Required Cognate Courses for all Concentrations

MATH 235. Calculus I [C3QR] **Credits: 4.00**
 or
 MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00 and**
 MATH 232. Calculus with Functions II **Credits: 3.00**
 MATH 236. Calculus II **Credits: 4.00**
 PHYS 240. University Physics I [C3PP] **Credits: 3.00**
 PHYS 250. University Physics II **Credits: 3.00**
 PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00**
 PHYS 250L. University Physics Laboratory II **Credits: 1.00**

Total: 16-18 Credit Hours

Footnote

¹ CHEM 131L-CHEM 132L may be substituted.

Electives

The well-prepared student is encouraged to take as many of the additional departmental offerings as possible as electives with attention being given to junior and/or senior research projects.

Three credits of undergraduate research (CHEM 390/CHEM 497/CHEM 499A) may be used to satisfy chemistry elective requirements if the research project is completed with the same faculty mentor over multiple semesters.

Additional Information

Students completing a B.S. degree in Chemistry must select either a major in Chemistry or Biophysical Chemistry. They cannot earn a major in both areas. Students majoring in Chemistry must also select one of six concentrations and complete all course work in that concentration. The credit hours for major requirements will vary based on the chosen concentration.

Each student majoring in Chemistry, in consultation with their faculty adviser, will choose one of the following program concentrations.

Chemistry Concentrations

All ACS Certified Programs require a minimum of 400 hours of laboratory and research.

Concentration I: American Chemical Society Certified Curriculum in Chemistry Concentration

Students completing concentration I must complete the courses below in addition to core courses.

CHEM 352. Instrumental Analysis **Credits: 3.00**
CHEM 352L. Instrumental Analysis Laboratory **Credits: 2.00**
CHEM 432. Physical Chemistry II **Credits: 3.00**
CHEM 438L. Physical Chemistry Laboratory **Credits: 2.00**
CHEM 470. Inorganic Chemistry II **Credits: 3.00**
MATH 237. Calculus III **Credits: 4.00**
MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**

American Chemical Society Certified Curriculum in Chemistry Concentration Total: 21 Credit Hours

Concentration II: American Chemical Society Certified Curriculum in Biochemistry Concentration

This program meets the recommended undergraduate degree requirements of the American Society for Biochemistry and Molecular Biology for a major in biochemistry. Students completing concentration II must complete the courses below in addition to core courses.

CHEM 352. Instrumental Analysis **Credits: 3.00**
CHEM 352L. Instrumental Analysis Laboratory **Credits: 2.00**
CHEM 362. Biochemistry II **Credits: 3.00**
CHEM 366L. Biochemistry Laboratory **Credits: 2.00**
CHEM 432. Physical Chemistry II **Credits: 3.00**
CHEM 438L. Physical Chemistry Laboratory **Credits: 2.00**

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

BIO 240. Genetics **Credits: 3.00 and**
BIO 240L. Genetics Laboratory **Credits: 1.00**

BIO 245. General Microbiology **Credits: 3.00 and**
BIO 245L. General Microbiology Laboratory **Credits: 1.00**

BIO 480. Advanced Molecular Biology **Credits: 3.00 and**
BIO 480L. Advanced Molecular Biology Lab **Credits: 1.00**

American Chemical Society Certified Curriculum in Biochemistry Concentration Total: 31 Credit Hours

Concentration III: American Chemical Society Certified Curriculum in Materials Chemistry Concentration

Students completing concentration III must complete the courses below in addition to core courses.

CHEM 336L. Applied Physical Chemistry Laboratory **Credits: 2.00**
CHEM 352. Instrumental Analysis **Credits: 3.00**
CHEM 352L. Instrumental Analysis Laboratory **Credits: 2.00**
CHEM 375. An Introduction to Materials Science **Credits: 3.00**

CHEM 432. Physical Chemistry II **Credits: 3.00**
CHEM 445. Polymer Chemistry **Credits: 3.00**
CHEM 445L. Polymer Chem Lab **Credits: 1.00**
MATH 237. Calculus III **Credits: 4.00**
MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**

Choose one of the following: 3-4 Credit Hours

CHEM 485. Science of the Small **Credits: 4.00**
ENGR 314. Materials and Mechanics **Credits: 4.00**
ENGR 498. Advanced Topics in Engineering **Credits: 1.00-3.00** (*when topic is appropriate*)
GEOL 390. Laboratory Techniques in Geology (2, 2) **Credits: 3.00**

American Chemical Society Certified Curriculum in Materials Chemistry Total: 28-29 Credit Hours

Concentration IV: American Chemical Society Certified Curriculum in Chemical Education Concentration

Students completing concentration IV must complete the courses below in addition to core courses.

CHEM 352. Instrumental Analysis **Credits: 3.00**
CHEM 352L. Instrumental Analysis Laboratory **Credits: 2.00**
CHEM 432. Physical Chemistry II **Credits: 3.00**
CHEM 438L. Physical Chemistry Laboratory **Credits: 2.00**
ACS Certified Chemical Education Courses: See Licensure Programs.

American Chemical Society Certified Curriculum in Chemical Education Concentration Total: 30 Credit Hours

Concentration V: General Program in Chemistry Concentration

Students completing concentration V must complete the Degree and Major courses and the courses below in addition to core courses.

CHEM 336L. Applied Physical Chemistry Laboratory **Credits: 2.00**
CHEM 352. Instrumental Analysis **Credits: 3.00**
CHEM 352L. Instrumental Analysis Laboratory **Credits: 2.00**
Upper division chemistry elective **Credits: 3.00**

General Program in Chemistry Concentration Total: 10 Credit Hours

Concentration VI: Chemistry/Business Program

This program is designed for business-oriented chemistry students preparing for careers in patent law, technical sales, technical service and related areas. Chemistry Business students should declare a General Business minor for ease in enrolling in College of Business courses. Students completing concentration VI must complete the courses below in addition to core courses.

CHEM 336L. Applied Physical Chemistry Laboratory **Credits: 2.00**
ACTG 244. Accounting for Non-Business Majors **Credits: 3.00**
CIS 204. Computer Information Systems Fundamentals for Non-Business Majors **Credits: 3.00**
ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**
ECON 201. Introduction to Microeconomics **Credits: 3.00**
FIN 345. Finance Fundamentals for Non-Business Majors **Credits: 3.00**
MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**
MGT 305. Organizational Behavior and Human Resource Management **Credits: 3.00**
MKTG 380. Principles of Marketing **Credits: 3.00**
Approved chemistry, science and/or COB ¹ courses **Credits: 5.00**

Chemistry/Business Program Total: 31 Credit Hours

Footnote

¹ Although business electives may be taken by students in this concentration, the total number of business credit hours may not exceed 27.

Recommended Schedule for Majors

First Year

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
CHEM 132. General Chemistry II **Credits: 3.00**

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
or
CHEM 135L. Special General Chemistry Laboratory I **Credits: 1.00**

CHEM 132L. General Chemistry Laboratory **Credits: 1.00**
or
CHEM 136L. Special General Chemistry Laboratory II **Credits: 2.00**

MATH 235. Calculus I [C3QR] **Credits: 4.00**
MATH 236. Calculus II **Credits: 4.00**

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

General Education courses or electives **Credits: 10.00**

First Year Total: 30-31 Credit Hours

Second Year

CHEM 241. Organic Chemistry I **Credits: 3.00**
CHEM 242. Organic Chemistry II **Credits: 3.00**
CHEM 270. Inorganic Chemistry I **Credits: 3.00**

CHEM 287L. Integrated Inorganic/Organic Laboratory I **Credits: 2.00**
CHEM 288L. Integrated Inorganic/Organic Laboratory II **Credits: 2.00**
PHYS 240. University Physics I [C3PP] **Credits: 3.00**
PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00**
PHYS 250. University Physics II **Credits: 3.00**
PHYS 250L. University Physics Laboratory II **Credits: 1.00**
General Education courses or electives **Credits: 9.00**

Second Year Total: 30 Credit Hours

Third Year

CHEM 331. Physical Chemistry I **Credits: 3.00**
CHEM 351. Analytical Chemistry **Credits: 4.00**
CHEM 352. Instrumental Analysis **Credits: 3.00**
CHEM 352L. Instrumental Analysis Laboratory **Credits: 2.00**
CHEM 361. Biochemistry I **Credits: 3.00**
CHEM 481. Literature and Seminar I **Credits: 1.00**
CHEM 482. Literature and Seminar II **Credits: 1.00**
Courses in the concentration, General Education or electives **Credits: 13.00**

Third Year Total: 30 Credit Hours

Fourth Year

Courses in the concentration, General Education or electives **Credits: 29.00**

Fourth Year Total: 29 Credit Hours

Program Total: 120 Credit Hours

Department of Communication Sciences and Disorders

Ayasakanta Rout, **Head**
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Professors

C. Clinard, R. DePaolis, C. Dudding, L. Gray, A. Rout, G. Timler

Associate Professors

E. Kamarunas, C. Kuo, J. Lee, Y. Nie, E. Piker

Assistant Professors

E. Clinard, E. Zane

Lecturers

M. Garber, S. Harbick, S. Teter

Mission

The Department of Communication Sciences and Disorders engages students, faculty and members of the community to advance the state of knowledge through basic and applied research, innovative professional and pre-professional education, and enhanced clinical practices to better serve those with communication disorders.

The department is committed to promoting comprehensive, state-of-the-art undergraduate pre-professional education that includes discipline-specific course work and observation. In keeping with university requirements, this includes a broad-based General Education component. The department also delivers graduate-level course work and practicum experiences for those interested in entering professional practice in either speech-language pathology or audiology, a university teaching and research position, or a management/administrative position in service delivery settings.

The department is committed to advancing the state of knowledge in both basic and applied aspects of communication sciences and disorders through its master's and doctoral research degrees and the research activities of its faculty and students and to providing service to the profession, university and client communities at local, state, national and international levels. Through the Audiology and Speech-Language Clinics, the department provides services as part of the clinical teaching component of its mission and serves as a clinical research resource for students and faculty.

Goals

- Providing course work and observation at the undergraduate level, including study of the underlying science and development of human communication, and an introduction to disorders that may occur in human communication.
- Providing course work at the undergraduate level that will prepare students for: Graduate study in the areas of speech-language pathology or audiology; Graduate school in a related discipline; and A liberal education in the discipline of communication sciences and disorders.

Programs of Study

The department offers a B.A. and B.S. degree. The department also offers the M.S. in speech language pathology (professional preparation), the Au.D. (Doctor of Audiology) and the Ph.D. in communication sciences and disorders with emphases in audiology, speech-language pathology and/or speech and hearing science. Inquiries concerning these graduate programs should be directed to the dean of The Graduate School or the appropriate department graduate coordinator. A master's degree is the minimum requirement for competency/certification endorsed by the American Speech-Language-Hearing Association and for Virginia licensure in speech-language pathology. In audiology, a doctoral degree is the minimum requirement for competency/certification endorsed by the American Speech-Language-Hearing Association and for new Virginia licensure applicants.

The Audiology and Speech-Language Clinics

The JMU Audiology clinic and the JMU Speech-Language clinic provide the following services for individuals with communication disorders across the life

span of the university community and its service area. Appointments for services may be made by any member of the community.

Areas of Service Delivery

- Speech-language and/or hearing assessments
- Intervention programs in speech, language and hearing disorders
- Preventative and educational consultation
- Referrals for other professional services when indicated

Career Opportunities

Individuals with a graduate degree in audiology or speech-language pathology can pursue a variety of career options:

- Audiologist
 - Clinical Supervisor
 - Director of Speech and Hearing Services
 - Early Intervention Specialist
 - Hearing Scientist
 - Private Practitioner
 - Researcher
 - Speech-Language Pathologist
 - Speech Scientist
 - University Professor
- Individuals with a bachelor's degree may be qualified to pursue other career options:

- Audiology assistant
 - Speech-language pathology assistant
- Keep in mind that graduate study is required for most positions in this field. Some individuals who major in communication sciences and disorders go on for further study in special education, medicine and psychology.

Co-curricular Organizations

- National Student Speech-Language-Hearing Association
- Student Academy of Audiology

Communication Sciences and Disorders
major; B.A. degree option

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course(s) (in addition to General Education courses)	3
University electives	8-22
Major requirements (listed below; includes basic science requirements for ASHA certification)	56
	120

Total**Footnotes**

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures' placement test.

Major Requirements

CSD 200. Introduction to Communication Disorders **Credits: 3.00**

CSD 207. Phonetics **Credits: 3.00**

CSD 208. Anatomy and Physiology of the Ear and Voice Mechanism **Credits: 3.00**

CSD 209. Acoustics of Hearing and Speech **Credits: 3.00**

CSD 300. Language Development **Credits: 3.00**

CSD 301. Audiology **Credits: 3.00**

CSD 314. Phonological and Language Disorders **Credits: 3.00**

CSD 318. Aural Rehabilitation **Credits: 3.00**

CSD 412. Professional Issues and Multicultural Considerations in Communication Disorders **Credits: 3.00**

CSD 415. Neuroanatomy and Neurogenic Communication Disorders **Credits: 3.00**³

CSD 416. Organic Disorders in Communication Sciences and Disorders **Credits: 3.00**

PSYC 101. General Psychology [C5SD] **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

EXED 200. Foundations of Exceptional Education **Credits: 3.00**

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

Choose one of the following:

CSD 470. Methods and Observation **Credits: 3.00**

CSD 471. Methods and Observation in Audiology **Credits: 3.00**

Basic Science Requirements

Requirement to meet basic science requirements for ASHA certification standards. Some graduate programs may have more specific requirements. Students are advised to check their programs of interest early to ensure they are taking the appropriate courses.

One course with BIO prefix **Credits: 3.00 - 4.00**⁴

One course with either PHYS or CHEM prefix **Credits: 3.00 - 4.00**⁴

Major Requirements Total: 54-56 Credit Hours**Footnotes**

³ CSD students must take CSD 415; BIO 415 may not be substituted.

⁴ BIO, CHEM/PHYS, MATH, and SOCI courses may also be used to fulfill General Education or B.S. degree requirements

Recommended Schedule for Majors**First Year**

CSD 200. Introduction to Communication Disorders **Credits: 3.00**

PSYC 101. General Psychology [C5SD] **Credits: 3.00**

Biological sciences course **Credits: 3.00 - 4.00**

General Education courses and/or B.A./B.S. degree requirements **Credits: 21.00**

First Year Total: 30-31 Credit Hours**Second Year**

CSD 207. Phonetics **Credits: 3.00**

CSD 208. Anatomy and Physiology of the Ear and Voice Mechanism **Credits: 3.00**

CSD 209. Acoustics of Hearing and Speech **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

EXED 200. Foundations of Exceptional Education **Credits: 3.00**

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

Physics or chemistry course **Credits: 3.00 - 4.00**

General Education courses and/or B.A./B.S. degree requirements **Credits: 9.00 - 11.00**

Second Year Total: 30-33 Credit Hours**Third Year**

CSD 300. Language Development **Credits: 3.00**

CSD 301. Audiology **Credits: 3.00**

CSD 314. Phonological and Language Disorders **Credits: 3.00**

CSD 318. Aural Rehabilitation **Credits: 3.00**

General Education, elective/restrictive elective and/or B.A./B.S. degree requirements **Credits: 18.00 - 21.00**

Third Year Total: 30-33 Credit Hours**Fourth Year**

CSD 412. Professional Issues and Multicultural Considerations in Communication Disorders **Credits: 3.00**

CSD 415. Neuroanatomy and Neurogenic Communication Disorders **Credits: 3.00**

CSD 416. Organic Disorders in Communication Sciences and Disorders **Credits: 3.00**

CSD 470. Methods and Observation **Credits: 3.00**

CSD 471. Methods and Observation in Audiology **Credits: 3.00**

Electives / restrictive electives **Credits: 13.00 - 18.00**

Fourth Year Total: 25-30 Credit Hours**Program Total: 120 Credit Hours**

Communication Sciences and Disorders

major; B.S. degree option

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement (in addition to General Education) ²	3
Scientific Literacy requirement (in addition to General Education)	3-4
University electives	10-13
Major requirements (listed below; includes basic science requirements for ASHA certification)	60-62
Total	120

Footnotes

¹ The General Education programs contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within the major.

² The quantitative literacy requirement may be fulfilled by courses required for the major.

Major Requirements

Required Courses

CSD 200. Introduction to Communication Disorders **Credits: 3.00**
CSD 207. Phonetics **Credits: 3.00**
CSD 208. Anatomy and Physiology of the Ear and Voice Mechanism **Credits: 3.00**
CSD 209. Acoustics of Hearing and Speech **Credits: 3.00**
CSD 300. Language Development **Credits: 3.00**
CSD 301. Audiology **Credits: 3.00**
CSD 314. Phonological and Language Disorders **Credits: 3.00**
CSD 318. Aural Rehabilitation **Credits: 3.00**
CSD 412. Professional Issues and Multicultural Considerations in Communication Disorders **Credits: 3.00**
CSD 415. Neuroanatomy and Neurogenic Communication Disorders **Credits: 3.00** ³
CSD 416. Organic Disorders in Communication Sciences and Disorders **Credits: 3.00**
PSYC 101. General Psychology [C5SD] **Credits: 3.00**
PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**
EXED 200. Foundations of Exceptional Education **Credits: 3.00**
MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

Choose one of the following: 3 Credit Hours

CSD 470. Methods and Observation **Credits: 3.00**

CSD 471. Methods and Observation in Audiology **Credits: 3.00**

Basic Science Requirements

Requirement to meet basic science requirements for ASHA certification standards. Some graduate programs may have more specific requirements. Students are advised to check their programs of interest early to ensure they are taking the appropriate courses.

One course with BIO prefix **Credits: 3.00 - 4.00** ⁴

One course with either PHYS or CHEM prefix **Credits: 3.00 - 4.00** ⁴

Restrictive electives: 6 Credit Hours

Select 6 credits from the following options.

One course with BIO prefix (in addition to the CSD basic science requirement) **Credits: 3.00 - 4.00** ⁴

One course with MATH prefix (in addition to MATH 220) **Credits: 3.00** ⁴

One course with SOCI prefix **Credits: 3.00** ⁴

CSD 420. Introduction to Sign Language **Credits: 3.00**

Footnotes

³ CSD students must take CSD 415; BIO 415 may not be substituted.

⁴ BIO, CHEM/PHYS, MATH, and SOCI courses may also be used to fulfill General Education or B.S. degree requirements

Major Requirements Total: 60-62 Credit Hours

Recommended Schedule for Majors

First Year

CSD 200. Introduction to Communication Disorders **Credits: 3.00**
PSYC 101. General Psychology [C5SD] **Credits: 3.00**
Biological sciences course **Credits: 3.00 - 4.00**
General Education courses and/or B.A./B.S. degree requirements **Credits: 21.00**

First Year Total: 30-31 Credit Hours

Second Year

CSD 207. Phonetics **Credits: 3.00**
CSD 208. Anatomy and Physiology of the Ear and Voice Mechanism **Credits: 3.00**
CSD 209. Acoustics of Hearing and Speech **Credits: 3.00**
EXED 200. Foundations of Exceptional Education **Credits: 3.00**
MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**
PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**
Physics or chemistry course **Credits: 3.00 - 4.00**
General Education courses and/or B.A./B.S. degree requirements **Credits: 9.00 - 11.00**

Second Year Total: 30-33 Credit Hours

Third Year

CSD 300. Language Development **Credits: 3.00**

CSD 301. Audiology **Credits: 3.00**

CSD 314. Phonological and Language Disorders **Credits: 3.00**

CSD 318. Aural Rehabilitation **Credits: 3.00**

General Education, elective/restrictive elective and/or B.A./B.S. degree requirements **Credits: 18.00 - 21.00**

Third Year Total: 30-33 Credit Hours

Fourth Year

CSD 412. Professional Issues and Multicultural Considerations in Communication Disorders **Credits: 3.00**

CSD 415. Neuroanatomy and Neurogenic Communication Disorders **Credits: 3.00**

CSD 416. Organic Disorders in Communication Sciences and Disorders **Credits: 3.00**

CSD 470. Methods and Observation **Credits: 3.00**

CSD 471. Methods and Observation in Audiology **Credits: 3.00**

Electives / restrictive electives **Credits: 13.00 - 18.00**

Fourth Year Total: 25-30 Credit Hours

Program Total: 120 Credit Hours

School of Communication Studies

Lori L. Britt, **Interim Director**

Lee Mayfield, **Interim Assistant Director**

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Professors

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Associate Professors

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Assistant Professors

R. Cortés, K. Dillard, M. Ittefaq, P. Mabrey, M. Marsh, K. Okamoto, S. Qin, M. Souders

Senior Lecturers

E. Armstrong, A. Dupal, L. Mayfield

Lecturers/Instructors

M. Ala-Uddiin, K. Báez, A. Barnes, N. Barnes, V. Bertram, C. Bright, J. Gochenour, K. Hopkinson, T. Johnson, J. Krauklis, R. Mitchell, N. Selove

Mission

We are a community engaged in teaching, researching and practicing communication as central to cultivating ethical, productive and meaningful lives and relationships.

Goals

As the school offers courses and programs in communication studies, the school seeks to fulfill the following goals:

To prepare all JMU students who take a communication studies course to use oral communication skills effectively.

To prepare students with a major or minor in communication studies for graduate and professional study as well as for careers in communication and communication-related professions.

To provide co-curricular opportunities which enhance and reinforce communication competencies for all JMU students.

Career Opportunities and Marketable Skills

Students of communication studies develop skill competencies required for effective interaction and leadership in communities, workplaces and groups. Some of these skills include:

Presentational Speaking

Empathic listening

Interacting in small groups

Using nonverbal communication skills such as use of space, voice, gaze and facial expressions

Constructing persuasive messages and campaigns

Conducting research that leads to insights about human communication patterns

Presenting information digitally

Analyzing communication at all levels including interpersonal, small group, organizational and public

Advocating successfully

Using language effectively

Writing effectively

Understanding and applying communications research and theory

Mediating and resolving conflicts

Collaborative problem solving

These skills support careers in such fields as:

Public Relations

Strategic Communication

Consulting

Entertainment

Branding and Digital/Social Media

Hospitality

Management

Human Resources

Politics

Sales

Teaching
Corporate Communication and Public Affairs
Grassroots and Non-Profit Advocacy

Study in communication studies also serves as valuable pre-professional preparation for graduate and professional studies in the following fields:

Communication
Counseling
Law
Management
Ministry

Co-curricular Activities and Organizations

To enhance courses and programs in communication studies, the school offers a variety of co-curricular activities and organizations. Involvement in some of these activities can earn students practicum credit.

Activities and Organizations

Debate Team: Affords all JMU students interested in debating intercollegiate tournament competition and local audience experiences.

Individual Events Team: Intercollegiate tournament competition and local audience experiences for all JMU students interested in public speaking and the oral interpretation of literature can be acquired through individual events team participation.

Annual Communication Studies Conference: Annual program highlighting undergraduate scholarship in which students deliver professional presentations to the JMU community on a variety of topics that reflect the diverse research methodologies and areas of study in the School of Communication Studies.

Lambda Pi Eta: A chapter of a national honorary organization for students interested in communication.

Public Relations Student Society Association: An award-winning student organization for students pursuing careers in public relations.

Bluestone Communications: An award-winning student run Public Relations firm that works with real clients in strategic PR planning, primary market research, social media counseling, creative work, media relations and special event planning.

Institute for Constructive Advocacy and Dialogue: Students taking coursework in facilitation and group communication can work with the institute in designing and facilitating group processes and gain practicum credit.

Communication Studies, B.A.

Program Description

The School of Communication Studies offers the Bachelor of Science and Bachelor of Arts degrees with a major in communication studies. Students must take at least 39 hours of work in communication studies beyond the General Education requirement.

All programs must include at least five elements:

Twelve hours of required core communication studies courses.
Three hours of an advanced research methods course.

Eighteen hours of communication concentration courses.
Six hours of elective courses in communication studies.

A minor, second major, or twelve hours of course work at the 300 level or above outside of the SCOM major.

Admission to the Major

Admission to JMU does not guarantee admission to the School of Communication Studies. All students interested in majoring in the program must apply for a limited number of spaces while completing SCOM 240 and SCOM 240L. Students must change their major to "SCOM declared" in order to register for SCOM 240 and SCOM 240L. SCOM 240 and SCOM 240L must be taken simultaneously.

The School of Communication Studies reviews applications for admission to the major each semester. Students must submit their online application (which can be accessed from the SCOM website) in the semester in which they are completing the SCOM 240 and SCOM 240L requirements. Applications are due by October 15 (fall semester), March 15 (spring semester) and May 30 (summer semester). Students who have applied by the above deadlines will be notified of the department's admission decision at the end of the semester in which they complete the SCOM 240 and SCOM 240L requirements.

Admission to the major is based on availability to the most qualified students as determined by performance in SCOM 240 and SCOM 240L. Students must attain a minimum grade of a "C-" in SCOM 240 and SCOM 240L to be considered for admittance and to count the credits toward the major.

Students not admitted may retake SCOM 240 and SCOM 240L for repeat or repeat/forgive credit in the next regular semester (fall or spring). Students may also retake the course in the Summer session if seats are available. The school will look only at their highest grades earned for each course when evaluating a student's second application.

Until fully admitted, SCOM-declared students may take only 9 hours of SCOM major credit. Only up to nine hours of SCOM courses taken before full admittance to the major may satisfy major requirements, including SCOM 240 and SCOM 240L (SCOM 121/SCOM 122/SCOM 123 do not count towards these nine hours).

Successful completion of a major in the School of Communication Studies requires, at the very least, a minimum of four semesters after a student is fully admitted to the school. Depending upon the student's particular circumstances and degree progress, more than four semesters may be required for completing the major.

Policy for Students Transferring from Another Institution

Students applying from other institutions are held to the same policies and guidelines as other applicants. However, once admitted to the School of Communication Studies, transfer students may petition for SCOM credit for courses taken at previous institutions. As with other applicants, they may only use up to nine hours of SCOM courses taken before full admittance to the major to satisfy major requirements, including SCOM 240 and SCOM 240L.

Minimum Grades

Any course taken to fulfill a degree requirement in communication studies must be completed with a minimum grade of "C-." A communication studies course completed with a grade of "D" may be credited toward graduation but may not be included as coursework toward a communication studies major or minor. Additionally, courses completed with a grade less than "C-" will not count as fulfilling prerequisites for future courses, and enrolled students may be administratively removed from courses for which they have not completed a required prerequisite with a minimum grade of "C-."

Limitations in Applied Courses

No more than six hours combined credit in SCOM 318, SCOM 390 and SCOM 495 may be counted toward a major in communication studies unless approved by the academic unit head.

Double Counting

A student with a Communication Studies major or minor may use courses that satisfy their major or minor requirements to satisfy requirements for another major or minor. There is no limit on the number of classes a student may double count within the majors or minors.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
University electives ³	11-49
Major requirements (listed below)	39
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the **Department of Foreign Languages, Literatures and Cultures' placement test**.

³ A minimum of 12 credit hours of university electives must be at the 300 level or above, or students must earn a minor or second major.

Major Requirements: 12 Credit Hours

SCOM 240. Introduction to Communication Theory **Credits: 2.00**

SCOM 240L. Communication Theory Lab **Credits: 1.00**

SCOM 242. Presentational Speaking **Credits: 3.00**

SCOM 280. Introduction to Communication Research **Credits: 3.00** ¹

SCOM 341. Persuasion **Credits: 3.00**

Advanced Research Methods: Choose One: 3 Credit Hours

SCOM 381. Rhetorical Research Methods **Credits: 3.00**

SCOM 383. Quantitative Experimental Research Methods **Credits: 3.00**

SCOM 385. Qualitative Research Methods **Credits: 3.00**

SCOM 386. Survey Research Methods **Credits: 3.00**

SCOM 388. Campaign Research Methods **Credits: 3.00**

Communication Studies Concentration: 18 Credit Hours

Communication Studies Electives: 6 Credit Hours

Footnote

¹ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

Major Requirements Total: 39 Credit Hours

Communication Studies Concentrations

Advocacy Studies Concentration

This concentration prepares students to understand, critically evaluate and engage the communication theories, processes, media institutions and communication technologies that citizens, political leaders, government officials, public administrators, interest groups and community service organizations use to campaign, deliberate, adjudicate, govern and advocate for social change. Skilled advocates adopt, develop and implement diverse sets of communication strategies that help clients articulate interests and goals, determine social systems and audiences most likely to achieve goals, identify effective media and appropriate goal oriented messages, and develop plans for implementing change.

Advocacy Studies Concentration Core: Required Courses: 12 Credit Hours

SCOM 342. Argument and Advocacy **Credits: 3.00**

SCOM 352. Communication and Social Movements **Credits: 3.00**

SCOM 353. American Political Culture and Communication **Credits: 3.00**

SCOM 442. Advanced Topics in Advocacy Studies **Credits: 3.00**

Advocacy Studies Concentration Electives: Choose two: 6 Credit Hours

SCOM 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**
or

WGSS 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**
 SCOM 302. Third Wave Ecofeminism **Credits: 3.00**
 or
 WGSS 302. Third Wave Ecofeminism **Credits: 3.00**
 SCOM 331. Communication and Conflict **Credits: 3.00**
 SCOM 343. Contemporary Rhetorical Theory and Practice **Credits: 3.00**
 or
 WRTC 430. Contemporary Rhetorical Theory and Practice **Credits: 3.00**
 SCOM 346. Free Speech in America **Credits: 3.00**
 SCOM 347. Communication, Diversity and Popular Culture **Credits: 3.00**
 SCOM 354. Environmental Communication and Advocacy **Credits: 3.00**
 or
 WRTC 326. Environmental Communication and Advocacy **Credits: 3.00**
 SCOM 357. Youth, Communication and Culture **Credits: 3.00**
 or
 SMAD 357. Youth, Communication and Culture **Credits: 3.00**
 SCOM 420. Feminist Rhetorics **Credits: 3.00**
 or
 WGSS 420. Feminist Rhetorics **Credits: 3.00**
 or
 WRTC 420. Feminist Rhetorics **Credits: 3.00**
 SCOM 431. Legal Communication **Credits: 3.00**
 SCOM 453. Political Campaign Communication **Credits: 3.00**
 SCOM 470. Health Communication Campaigns **Credits: 3.00**
 SCOM 472. Media and Politics **Credits: 3.00**
 or
 POSC 472. Media and Politics **Credits: 3.00**
 or
 SMAD 472. Media and Politics **Credits: 3.00**

Advocacy Studies Concentration Total: 18 Credit Hours

Cultural Communication Concentration

This concentration prepares students to analyze, engage and manage communication situations where cultural identity becomes relevant to the persons involved in the interaction. Students analyze communication processes and theories that help explain dynamics of intercultural interactions in personal and professional contexts. The concentration affords students cultural competencies necessary for personal growth and professional success in increasingly diverse work and social settings. Communication skills learned here prepare students for careers in education, management and training, international relations, and law.

Cultural Communication Concentration Core: Required Courses: 9 Credit Hours

SCOM 248. Intercultural Communication **Credits: 3.00**
 SCOM 349. Ethnographic Approaches to Communication Studies **Credits: 3.00**
 SCOM 448. Communication, Culture and Identity **Credits: 3.00**

Communication Skills: Choose one: 3 Credit Hours

SCOM 261. Public Relations Techniques I: Written **Credits: 3.00**

SCOM 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**
 or
 WGSS 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**
 SCOM 325. Small Group Communication **Credits: 3.00**
 SCOM 332. Mediation **Credits: 3.00**
 SCOM 335. Communication Consulting **Credits: 3.00**
 SCOM 338. The Art of Public Debate **Credits: 3.00**
 SCOM 340. Principles and Processes of Interviewing **Credits: 3.00**
 SCOM 342. Argument and Advocacy **Credits: 3.00**
 SCOM 344. Oral Interpretation **Credits: 3.00**
 SCOM 358. Business and Professional Communication Studies **Credits: 3.00**
 SCOM 447. Facilitating Public and Organizational Engagement Processes **Credits: 3.00**
 SCOM 449. Communication Training **Credits: 3.00**

Cultural Communication Concentration Electives: Choose two: 6 Credit Hours

SCOM 305. Language and Culture **Credits: 3.00**
 or
 ANTH 305. Language and Culture **Credits: 3.00**
 SCOM 347. Communication, Diversity and Popular Culture **Credits: 3.00**
 SCOM 348. Communication and Gender **Credits: 3.00**
 SCOM 352. Communication and Social Movements **Credits: 3.00**
 SCOM 355. Food as Communication **Credits: 3.00**
 SCOM 357. Youth, Communication and Culture **Credits: 3.00**

Cultural Communication Concentration Total: 18 Credit Hours

Generalist Concentration

This concentration allows students to combine interests in several areas of communication study. The generalist focus allows students to choose options that create intersections that would support specific career outcomes, such as focusing on health communication and organizational communication to prepare for a career in health organizations, or a focus on advocacy and culture to prepare for work in humanitarian and social justice fields.

Communication Skills: Choose one: 3 Credit Hours

SCOM 261. Public Relations Techniques I: Written **Credits: 3.00**
 SCOM 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**
 or
 WGSS 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**
 SCOM 325. Small Group Communication **Credits: 3.00**
 SCOM 332. Mediation **Credits: 3.00**
 SCOM 335. Communication Consulting **Credits: 3.00**
 SCOM 338. The Art of Public Debate **Credits: 3.00**
 SCOM 340. Principles and Processes of Interviewing **Credits: 3.00**
 SCOM 342. Argument and Advocacy **Credits: 3.00**
 SCOM 344. Oral Interpretation **Credits: 3.00**
 SCOM 358. Business and Professional Communication Studies **Credits: 3.00**
 SCOM 361. Public Relations Techniques II: Visual **Credits: 3.00**
 SCOM 367. Advanced Public Relations Writing **Credits: 3.00**

SCOM 447. Facilitating Public and Organizational Engagement Processes **Credits: 3.00**
SCOM 449. Communication Training **Credits: 3.00**

Communication Theory and Context: Choose two: 6 Credit Hours

SCOM 245. Signs, Symbols and Social Interaction **Credits: 3.00**
SCOM 248. Intercultural Communication **Credits: 3.00**
SCOM 260. Introduction to Public Relations **Credits: 3.00**
SCOM 302. Third Wave Ecofeminism **Credits: 3.00**
or
WGSS 302. Third Wave Ecofeminism **Credits: 3.00**
SCOM 305. Language and Culture **Credits: 3.00**
or
ANTH 305. Language and Culture **Credits: 3.00**
SCOM 313. Topics in Communication Studies **Credits: 1.00 - 3.00**
SCOM 314. Communication in Romantic Relationships **Credits: 3.00**
SCOM 320. Introduction to Interpersonal Communication **Credits: 3.00**
SCOM 330. Special Topics in Interpersonal Communication **Credits: 3.00**
SCOM 331. Communication and Conflict **Credits: 3.00**
SCOM 334. Alternative Dispute Resolution **Credits: 3.00**
SCOM 345. Nonverbal Communication **Credits: 3.00**
SCOM 346. Free Speech in America **Credits: 3.00**
SCOM 347. Communication, Diversity and Popular Culture **Credits: 3.00**
SCOM 348. Communication and Gender **Credits: 3.00**
or
WGSS 348. Communication and Gender **Credits: 3.00**
SCOM 349. Ethnographic Approaches to Communication Studies **Credits: 3.00**
SCOM 350. Organizational Communication **Credits: 3.00**
SCOM 351. Visual Rhetoric **Credits: 3.00**
or
WRTC 351. Visual Rhetoric **Credits: 3.00**
SCOM 352. Communication and Social Movements **Credits: 3.00**
SCOM 353. American Political Culture and Communication **Credits: 3.00**
SCOM 354. Environmental Communication and Advocacy **Credits: 3.00**
or
WRTC 326. Environmental Communication and Advocacy **Credits: 3.00**
SCOM 355. Food as Communication **Credits: 3.00**
SCOM 357. Youth, Communication and Culture **Credits: 3.00**
SCOM 363. International Public Relations **Credits: 3.00**
SCOM 365. Sports Public Relations **Credits: 3.00**
SCOM 369. Topics in Engaged Public Relations **Credits: 3.00**
SCOM 370. Introduction to Health Communication **Credits: 3.00**
SCOM 395. Study Abroad Seminar **Credits: 3.00 - 6.00**
SCOM 413. Advanced Topics in Communication Studies **Credits: 1.00 - 6.00**
SCOM 414. Attachment Communication **Credits: 3.00**
SCOM 420. Feminist Rhetorics **Credits: 3.00**
or
WGSS 420. Feminist Rhetorics **Credits: 3.00**
or
WRTC 420. Feminist Rhetorics **Credits: 3.00**
SCOM 425. Leadership Communication **Credits: 3.00**
SCOM 431. Legal Communication **Credits: 3.00**
SCOM 432. Senior Seminar in Conflict Analysis and Intervention **Credits: 3.00**
SCOM 440. Family Communication **Credits: 3.00**
SCOM 441. Oral History **Credits: 3.00**

or
HIST 441. Oral History **Credits: 3.00**
SCOM 442. Advanced Topics in Advocacy Studies **Credits: 3.00**
SCOM 448. Communication, Culture and Identity **Credits: 3.00**
SCOM 450. Advanced Studies in Organizational Communication **Credits: 3.00**
SCOM 453. Political Campaign Communication **Credits: 3.00**
SCOM 460. Public Relations Management **Credits: 3.00**
SCOM 461. Public Relations Campaigns **Credits: 3.00**
SCOM 464. Communication, Culture and Sports **Credits: 3.00**
SCOM 470. Health Communication Campaigns **Credits: 3.00**
SCOM 471. Culture and Health Communication **Credits: 3.00**
SCOM 472. Media and Politics **Credits: 3.00**
or
POSC 472. Media and Politics **Credits: 3.00**
or
SMAD 472. Media and Politics **Credits: 3.00**

Advanced Communication Theory and Context: Choose one: 3 Credit Hours

SCOM 413. Advanced Topics in Communication Studies **Credits: 1.00 - 6.00**
SCOM 414. Attachment Communication **Credits: 3.00**
SCOM 420. Feminist Rhetorics **Credits: 3.00**
or
WGSS 420. Feminist Rhetorics **Credits: 3.00**
or
WRTC 420. Feminist Rhetorics **Credits: 3.00**
SCOM 425. Leadership Communication **Credits: 3.00**
SCOM 431. Legal Communication **Credits: 3.00**
SCOM 432. Senior Seminar in Conflict Analysis and Intervention **Credits: 3.00**
SCOM 440. Family Communication **Credits: 3.00**
SCOM 441. Oral History **Credits: 3.00**
or
HIST 441. Oral History **Credits: 3.00**
SCOM 442. Advanced Topics in Advocacy Studies **Credits: 3.00**
SCOM 448. Communication, Culture and Identity **Credits: 3.00**
SCOM 450. Advanced Studies in Organizational Communication **Credits: 3.00**
SCOM 453. Political Campaign Communication **Credits: 3.00**
SCOM 460. Public Relations Management **Credits: 3.00**
SCOM 461. Public Relations Campaigns **Credits: 3.00**
SCOM 464. Communication, Culture and Sports **Credits: 3.00**
SCOM 470. Health Communication Campaigns **Credits: 3.00**
SCOM 471. Culture and Health Communication **Credits: 3.00**
SCOM 472. Media and Politics **Credits: 3.00**
or
POSC 472. Media and Politics **Credits: 3.00**
or
SMAD 472. Media and Politics **Credits: 3.00**

Generalist Concentration 300/400-Level Electives: Choose two: 6 Credit Hours

SCOM 300/400 *Credits: 3.00*
SCOM 300/400 *Credits: 3.00*

Generalist Concentration Total: 18 Credit Hours

Health Communication Studies Concentration

This concentration prepares students for careers in local, state, or federal health agencies, hospitals/medical practices, non-profits, health-related industry, private research groups/foundations, and health education/promotion consulting firms. Students will gain strong writing and research skills and gain knowledge in the areas of: health communication, provider-patient communication, and health campaigns.

Health Communication Concentration Core: Required Courses: 9 Credit Hours

SCOM 370. Introduction to Health Communication **Credits: 3.00**
SCOM 468. Patient-Provider Communication **Credits: 3.00**
SCOM 470. Health Communication Campaigns **Credits: 3.00**

Communication Skills: Choose one: 3 Credit Hours

SCOM 335. Communication Consulting **Credits: 3.00**
SCOM 342. Argument and Advocacy **Credits: 3.00**
SCOM 358. Business and Professional Communication Studies **Credits: 3.00**
SCOM 447. Facilitating Public and Organizational Engagement Processes **Credits: 3.00**
SCOM 449. Communication Training **Credits: 3.00**

Health Communication Concentration Electives: Choose two: 6 Credit Hours

SCOM 303. Special Topics in Health Communication **Credits: 3.00** (may be taken twice when topic changes)
SCOM 320. Introduction to Interpersonal Communication **Credits: 3.00**
SCOM 331. Communication and Conflict **Credits: 3.00**
SCOM 345. Nonverbal Communication **Credits: 3.00**
SCOM 350. Organizational Communication **Credits: 3.00**
SCOM 440. Family Communication **Credits: 3.00**
SCOM 448. Communication, Culture and Identity **Credits: 3.00**
SCOM 471. Culture and Health Communication **Credits: 3.00**

Health Communication Studies Concentration Total: 18 Credit Hours

Interpersonal Communication Studies Concentration

Students analyze how messages are used to manage personal relationships in social and professional contexts. By examining research, theory and processes of interpersonal communication, students learn important principles for managing impressions and building rapport, identifying needs and pursuing influence goals, reducing relational uncertainty and adapting to change. Students completing the concentration learn to communicate the value of healthy relationships, are well prepared for graduate school, and develop relational skills for excelling in careers such as peer counseling, education, family and human services, sales and management, aging services, ministry and community leadership.

Interpersonal Communication Concentration Core: Required Courses: 6 Credit Hours

SCOM 320. Introduction to Interpersonal Communication **Credits: 3.00**
SCOM 440. Family Communication **Credits: 3.00**

Communication Skills (choose one): 3 Credit Hours

SCOM 325. Small Group Communication **Credits: 3.00**
SCOM 332. Mediation **Credits: 3.00**
SCOM 340. Principles and Processes of Interviewing **Credits: 3.00**
SCOM 358. Business and Professional Communication Studies **Credits: 3.00**

Communication Depth Elective: Choose one: 3 Credit Hours

SCOM 248. Intercultural Communication **Credits: 3.00**
SCOM 260. Introduction to Public Relations **Credits: 3.00**
SCOM 334. Alternative Dispute Resolution **Credits: 3.00**
SCOM 350. Organizational Communication **Credits: 3.00**
SCOM 370. Introduction to Health Communication **Credits: 3.00**
SCOM 432. Senior Seminar in Conflict Analysis and Intervention **Credits: 3.00**

Interpersonal Communication Concentration Electives: Choose two: 6 Credit Hours

SCOM 314. Communication in Romantic Relationships **Credits: 3.00**
SCOM 330. Special Topics in Interpersonal Communication **Credits: 3.00**
SCOM 331. Communication and Conflict **Credits: 3.00**
SCOM 345. Nonverbal Communication **Credits: 3.00**
SCOM 348. Communication and Gender **Credits: 3.00**
SCOM 414. Attachment Communication **Credits: 3.00**

Interpersonal Communication Studies Concentration Total: 18 Credit Hours

Organizational Communication Studies Concentration

Organizational communication involves the study of the ways people interact within organizations, such as business, government, education and nonprofit groups. The Organizational Communication concentration offers students the knowledge and skills for organizing people, information, and ideas and provides opportunities for hands on practice. Coursework prepares students to organize productive talk, facilitate training and skill development, lead through communication, and apply theories of organizing to improve practice in the world. This concentration prepares students for careers in such things as business, consulting, training and event planning and for the study of law.

Organizational Communication Core: Required Courses: 9 Credit Hours

SCOM 350. Organizational Communication **Credits: 3.00**
SCOM 358. Business and Professional Communication Studies **Credits: 3.00**
SCOM 450. Advanced Studies in Organizational Communication **Credits: 3.00**

Communication Skills: Choose one: 3 Credit Hours

SCOM 447. Facilitating Public and Organizational Engagement Processes **Credits: 3.00**
SCOM 449. Communication Training **Credits: 3.00**

Organization Communication Concentration Electives: Choose two: 6 Credit Hours

SCOM 320. Introduction to Interpersonal Communication **Credits: 3.00**
SCOM 325. Small Group Communication **Credits: 3.00**
SCOM 331. Communication and Conflict **Credits: 3.00**
SCOM 345. Nonverbal Communication **Credits: 3.00**
SCOM 347. Communication, Diversity and Popular Culture **Credits: 3.00**
SCOM 348. Communication and Gender **Credits: 3.00**
or
WGSS 348. Communication and Gender **Credits: 3.00**
SCOM 357. Youth, Communication and Culture **Credits: 3.00**
SCOM 425. Leadership Communication **Credits: 3.00**

Organizational Communication Studies Concentration Total: 18 Credit Hours

Public Relations Studies Concentration

This concentration focuses on the management of communication between organizations and their internal and external publics with the goal of mutual understanding and influence. Public relations practitioners work with specific audiences relative to focused goals. Preparation for a career in public relations should include a broad educational base and a variety of communication skills.

Public Relations Concentration Core: Required Courses: 9 Credit Hours

SCOM 260. Introduction to Public Relations **Credits: 3.00**
SCOM 261. Public Relations Techniques I: Written **Credits: 3.00**
SCOM 362. Public Relations Theory and Concepts **Credits: 3.00**

Advanced Public Relations Skills: Choose one: 3 Credit Hours

SCOM 361. Public Relations Techniques II: Visual **Credits: 3.00**
SCOM 367. Advanced Public Relations Writing **Credits: 3.00**

Public Relations in Context: Choose one: 3 Credit Hours

SCOM 363. International Public Relations **Credits: 3.00**
SCOM 365. Sports Public Relations **Credits: 3.00**
SCOM 369. Topics in Engaged Public Relations **Credits: 3.00**

SCOM 460. Public Relations Management **Credits: 3.00**

Public Relations Capstone: Choose one: 3 Credit Hours

SCOM 461. Public Relations Campaigns **Credits: 3.00**
SCOM 462. Student-run Public Relations Firm **Credits: 3.00**

Public Relations Studies Concentration Total: 18 Credit Hours

Recommended Schedule for Majors

Communication Studies Major Coursework Recommended Schedule

Generally, students will start their program in Communication Studies no earlier than their second semester and often at the beginning of their sophomore year. This is a suggested progression of major coursework. We recommend students take 30 credit hours per year to stay on track to meet all requirements in four years.

First Year

Declared Students (End of First-Year or Beginning of Second Year)

Declare the major on MyMadison

SCOM 240. Introduction to Communication Theory **Credits: 2.00**

SCOM 240L. Communication Theory Lab **Credits: 1.00**

Apply for the Major ¹

Research and select a minor or second major and begin coursework

Continue to fulfill all General Education Requirements

Footnote

¹ Note: Until fully-admitted, SCOM declared students may take only 9 hours of SCOM major credit.

First Year Total: 30 Credit Hours

Second Year

Complete SCOM Core Courses (9 hours)

SCOM 242. Presentational Speaking **Credits: 3.00**

SCOM 280. Introduction to Communication Research **Credits: 3.00**

SCOM 341. Persuasion **Credits: 3.00**

Begin Concentration Specific Coursework *Credits: 3.00*

Continue General Education coursework

Take requirements for B.A. Degree (*Language at 232 level, Philosophy class*) *Credits: 6.00*

Continue Minor or Second Major Coursework

Second Year Total: 30 Credit Hours

Third Year

Continue Concentration-Specific Requirements
Complete Advanced Research Methods Course
Complete General SCOM Electives
Explore internship opportunities to count for SCOM elective credit
Complete General Education coursework
Continue Minor or Second Major Coursework

Third Year Total: 30 Credit Hours

Fourth Year

Complete Concentration-Specific Requirements
Complete Minor or Second Major coursework

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Communication Studies, B.S.

Program Description

The School of Communication Studies offers the Bachelor of Science and Bachelor of Arts degrees with a major in communication studies. Students must take at least 39 hours of work in communication studies beyond the General Education requirement.

All programs must include at least five elements:

Twelve hours of required core communication studies courses.
Three hours of an advanced research methods course.
Eighteen hours of communication concentration courses.
Six hours of elective courses in communication studies.
A minor, second major or twelve hours of course work at the 300 level or above outside of the SCOM major.

Admission to the Major

Admission to JMU does not guarantee admission to the School of Communication Studies. All students interested in majoring in the program must apply for a limited number of spaces while completing SCOM 240 and SCOM 240L. Students must change their major to "SCOM declared" in order to register for SCOM 240 and SCOM 240L. SCOM 240 and SCOM 240L must be taken simultaneously.

The School of Communication Studies reviews applications for admission to the major each semester. Students must submit their online application (which can be accessed from the SCOM website) in the semester in which they are completing the SCOM 240 and SCOM 240L requirements. Applications are due by October 15 (fall semester), March 15 (spring semester), and May 30 (summer semester). Students who have applied by the above deadlines will be notified of the department's admission decision at the end of the semester in which they complete the SCOM 240 and SCOM 240L requirements.

Admission to the major is based on availability to the most qualified students as determined by performance in SCOM 240 and SCOM 240L. Students must attain a minimum grade of a "C-" in SCOM 240 and SCOM 240L to be considered for admittance and to count the credits toward the major.

Students not admitted may retake SCOM 240 and SCOM 240L for repeat or repeat/forgive credit in the next regular semester (fall or spring). Students may also retake the course in the Summer session if seats are available. The school will look only at their highest grades earned for each course when evaluating a student's second application.

Until fully-admitted, SCOM-declared students may take only 9 hours of SCOM major credit. Only up to nine hours of SCOM courses taken before full admittance to the major may satisfy major requirements, including SCOM 240 and SCOM 240L (SCOM 121/SCOM 122/SCOM 123 do not count towards these nine hours).

Successful completion of a major in the School of Communication Studies requires, at the very least, a minimum of four semesters after a student is fully admitted to the school. Depending upon the student's particular circumstances and degree progress, more than four semesters may be required for completing the major.

Policy for Students Transferring from Another Institution

Students applying from other institutions are held to the same policies and guidelines as other applicants. However, once admitted to the School of Communication Studies, transfer students may petition for SCOM credit for courses taken at previous institutions. As with other applicants, they may only use up to nine hours of SCOM courses taken before full admittance to the major to satisfy major requirements, including SCOM 240 and SCOM 240L.

Minimum Grades

Any course taken to fulfill a degree requirement in communication studies must be completed with a minimum grade of "C-." A communication studies course completed with a grade of "D" may be credited toward graduation but may not be included as coursework toward a communication studies major or minor. Additionally, courses completed with a grade less than "C-" will not count as fulfilling prerequisites for future courses, and enrolled students may be administratively removed from courses for which they have not completed a required prerequisite with a minimum grade of "C-."

Limitations in Applied Courses

No more than six hours combined credit in SCOM 318, SCOM 390 and SCOM 495 may be counted toward a major in communication studies unless approved by the academic unit head.

Double Counting

A student with a Communication Studies major or minor may use courses that satisfy their major or minor requirements to satisfy requirements for another major or minor. There is no limit on the number of classes a student may double count within the majors or minors.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement ²	3
Scientific Literacy requirement ²	3
University electives ³	21-46
Major requirements (listed below)	39
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² In addition to course work taken to fulfill General Education requirement.

³ A minimum of 12 credit hours of university electives must be at the 300 level or above, or students must earn a minor or second major.

Additional Information

In addition, students pursuing the B.S. degree must complete MATH 220 or a school-approved statistics course. School-approved statistics courses include but are not limited to, COB 191. MATH 220 can count as either a General Education or a B.S. quantitative requirement, but not both.

Major Requirements

Communication Studies Major Core: 12 Credit Hours

SCOM 240. Introduction to Communication Theory **Credits: 2.00**

SCOM 240L. Communication Theory Lab **Credits: 1.00**

SCOM 242. Presentational Speaking **Credits: 3.00**

SCOM 280. Introduction to Communication Research **Credits: 3.00** ¹

SCOM 341. Persuasion **Credits: 3.00**

Advanced Research Methods: Choose One: 3 Credit Hours

SCOM 381. Rhetorical Research Methods **Credits: 3.00**

SCOM 383. Quantitative Experimental Research Methods **Credits: 3.00**

SCOM 385. Qualitative Research Methods **Credits: 3.00**

SCOM 386. Survey Research Methods **Credits: 3.00**

SCOM 388. Campaign Research Methods **Credits: 3.00**

Communication Studies Concentration: 18 Credit Hours

Communication Studies Electives: 6 Credit Hours

Footnote

¹ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

Major Requirements Total: 39 Credit Hours

Communication Studies Concentrations

Advocacy Studies Concentration

This concentration prepares students to understand, critically evaluate and engage the communication theories, processes, media institutions and communication technologies that citizens, political leaders, government officials, public administrators, interest groups and community service organizations use to campaign, deliberate, adjudicate, govern and advocate for social change. Skilled advocates adopt, develop and implement diverse sets of communication strategies that help clients articulate interests and goals, determine social systems and audiences most likely to achieve goals, identify effective media and appropriate goal oriented messages, and develop plans for implementing change.

Advocacy Studies Concentration Core: Required Courses: 12 Credit Hours

SCOM 342. Argument and Advocacy **Credits: 3.00**

SCOM 352. Communication and Social Movements **Credits: 3.00**

SCOM 353. American Political Culture and Communication **Credits: 3.00**

SCOM 442. Advanced Topics in Advocacy Studies **Credits: 3.00**

Advocacy Studies Concentration Electives: Choose two: 6 Credit Hours

SCOM 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**
or

WGSS 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**

SCOM 302. Third Wave Ecofeminism **Credits: 3.00**

or

WGSS 302. Third Wave Ecofeminism **Credits: 3.00**

SCOM 331. Communication and Conflict **Credits: 3.00**

SCOM 343. Contemporary Rhetorical Theory and Practice **Credits: 3.00**

or

WRTC 430. Contemporary Rhetorical Theory and Practice **Credits: 3.00**

SCOM 346. Free Speech in America **Credits: 3.00**

SCOM 347. Communication, Diversity and Popular Culture **Credits: 3.00**

SCOM 354. Environmental Communication and Advocacy **Credits: 3.00**

or

WRTC 326. Environmental Communication and Advocacy **Credits: 3.00**

SCOM 357. Youth, Communication and Culture **Credits: 3.00**

or

SMAD 357. Youth, Communication and Culture **Credits: 3.00**

SCOM 420. Feminist Rhetorics **Credits: 3.00**

or

WGSS 420. Feminist Rhetorics **Credits: 3.00**

or

WRTC 420. Feminist Rhetorics **Credits: 3.00**

SCOM 431. Legal Communication **Credits: 3.00**
 SCOM 453. Political Campaign Communication **Credits: 3.00**
 SCOM 470. Health Communication Campaigns **Credits: 3.00**
 SCOM 472. Media and Politics **Credits: 3.00**
 or
 POSC 472. Media and Politics **Credits: 3.00**
 or
 SMAD 472. Media and Politics **Credits: 3.00**

Advocacy Studies Concentration Total: 18 Credit Hours

Cultural Communication Concentration

This concentration prepares students to analyze, engage and manage communication situations where cultural identity becomes relevant to the persons involved in the interaction. Students analyze communication processes and theories that help explain dynamics of intercultural interactions in personal and professional contexts. The concentration affords students cultural competencies necessary for personal growth and professional success in increasingly diverse work and social settings. Communication skills learned here prepare students for careers in education, management and training, international relations, and law.

Cultural Communication Concentration Core: Required Courses: 9 Credit Hours

SCOM 248. Intercultural Communication **Credits: 3.00**
 SCOM 349. Ethnographic Approaches to Communication Studies **Credits: 3.00**
 SCOM 448. Communication, Culture and Identity **Credits: 3.00**

Communication Skills: Choose one: 3 Credit Hours

SCOM 261. Public Relations Techniques I: Written **Credits: 3.00**
 SCOM 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**
 or
 WGSS 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**
 SCOM 325. Small Group Communication **Credits: 3.00**
 SCOM 332. Mediation **Credits: 3.00**
 SCOM 335. Communication Consulting **Credits: 3.00**
 SCOM 338. The Art of Public Debate **Credits: 3.00**
 SCOM 340. Principles and Processes of Interviewing **Credits: 3.00**
 SCOM 342. Argument and Advocacy **Credits: 3.00**
 SCOM 344. Oral Interpretation **Credits: 3.00**
 SCOM 358. Business and Professional Communication Studies **Credits: 3.00**
 SCOM 447. Facilitating Public and Organizational Engagement Processes **Credits: 3.00**
 SCOM 449. Communication Training **Credits: 3.00**

Cultural Communication Concentration Electives: Choose two: 6 Credit Hours

SCOM 305. Language and Culture **Credits: 3.00**
 or
 ANTH 305. Language and Culture **Credits: 3.00**

SCOM 347. Communication, Diversity and Popular Culture **Credits: 3.00**
 SCOM 348. Communication and Gender **Credits: 3.00**
 SCOM 352. Communication and Social Movements **Credits: 3.00**
 SCOM 355. Food as Communication **Credits: 3.00**
 SCOM 357. Youth, Communication and Culture **Credits: 3.00**

Cultural Communication Concentration Total: 18 Credit Hours

Generalist Concentration

This concentration allows students to combine interests in several areas of communication study. The generalist focus allows students to choose options that create intersections that would support specific career outcomes, such as focusing on health communication and organizational communication to prepare for a career in health organizations, or a focus on advocacy and culture to prepare for work in humanitarian and social justice fields.

Communication Skills: Choose one: 3 Credit Hours

SCOM 261. Public Relations Techniques I: Written **Credits: 3.00**
 SCOM 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**
 or
 WGSS 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**
 SCOM 325. Small Group Communication **Credits: 3.00**
 SCOM 332. Mediation **Credits: 3.00**
 SCOM 335. Communication Consulting **Credits: 3.00**
 SCOM 338. The Art of Public Debate **Credits: 3.00**
 SCOM 340. Principles and Processes of Interviewing **Credits: 3.00**
 SCOM 342. Argument and Advocacy **Credits: 3.00**
 SCOM 344. Oral Interpretation **Credits: 3.00**
 SCOM 358. Business and Professional Communication Studies **Credits: 3.00**
 SCOM 361. Public Relations Techniques II: Visual **Credits: 3.00**
 SCOM 367. Advanced Public Relations Writing **Credits: 3.00**
 SCOM 447. Facilitating Public and Organizational Engagement Processes **Credits: 3.00**
 SCOM 449. Communication Training **Credits: 3.00**

Communication Theory and Context: Choose two: 6 Credit Hours

SCOM 245. Signs, Symbols and Social Interaction **Credits: 3.00**
 SCOM 248. Intercultural Communication **Credits: 3.00**
 SCOM 260. Introduction to Public Relations **Credits: 3.00**
 SCOM 302. Third Wave Ecofeminism **Credits: 3.00**
 or
 WGSS 302. Third Wave Ecofeminism **Credits: 3.00**
 SCOM 305. Language and Culture **Credits: 3.00**
 or
 ANTH 305. Language and Culture **Credits: 3.00**
 SCOM 313. Topics in Communication Studies **Credits: 1.00 - 3.00**
 SCOM 314. Communication in Romantic Relationships **Credits: 3.00**
 SCOM 320. Introduction to Interpersonal Communication **Credits: 3.00**
 SCOM 330. Special Topics in Interpersonal Communication **Credits: 3.00**
 SCOM 331. Communication and Conflict **Credits: 3.00**

SCOM 334. Alternative Dispute Resolution **Credits: 3.00**
 SCOM 345. Nonverbal Communication **Credits: 3.00**
 SCOM 346. Free Speech in America **Credits: 3.00**
 SCOM 347. Communication, Diversity and Popular Culture **Credits: 3.00**
 SCOM 348. Communication and Gender **Credits: 3.00**
 or
 WGSS 348. Communication and Gender **Credits: 3.00**
 SCOM 349. Ethnographic Approaches to Communication Studies **Credits: 3.00**
 SCOM 350. Organizational Communication **Credits: 3.00**
 SCOM 351. Visual Rhetoric **Credits: 3.00**
 or
 WRTC 351. Visual Rhetoric **Credits: 3.00**
 SCOM 352. Communication and Social Movements **Credits: 3.00**
 SCOM 353. American Political Culture and Communication **Credits: 3.00**
 SCOM 354. Environmental Communication and Advocacy **Credits: 3.00**
 or
 WRTC 326. Environmental Communication and Advocacy **Credits: 3.00**
 SCOM 355. Food as Communication **Credits: 3.00**
 SCOM 357. Youth, Communication and Culture **Credits: 3.00**
 SCOM 363. International Public Relations **Credits: 3.00**
 SCOM 365. Sports Public Relations **Credits: 3.00**
 SCOM 369. Topics in Engaged Public Relations **Credits: 3.00**
 SCOM 370. Introduction to Health Communication **Credits: 3.00**
 SCOM 395. Study Abroad Seminar **Credits: 3.00 - 6.00**
 SCOM 413. Advanced Topics in Communication Studies **Credits: 1.00 - 6.00**
 SCOM 414. Attachment Communication **Credits: 3.00**
 SCOM 420. Feminist Rhetorics **Credits: 3.00**
 or
 WGSS 420. Feminist Rhetorics **Credits: 3.00**
 or
 WRTC 420. Feminist Rhetorics **Credits: 3.00**
 SCOM 425. Leadership Communication **Credits: 3.00**
 SCOM 431. Legal Communication **Credits: 3.00**
 SCOM 432. Senior Seminar in Conflict Analysis and Intervention **Credits: 3.00**
 SCOM 440. Family Communication **Credits: 3.00**
 SCOM 441. Oral History **Credits: 3.00**
 or
 HIST 441. Oral History **Credits: 3.00**
 SCOM 442. Advanced Topics in Advocacy Studies **Credits: 3.00**
 SCOM 448. Communication, Culture and Identity **Credits: 3.00**
 SCOM 450. Advanced Studies in Organizational Communication **Credits: 3.00**
 SCOM 453. Political Campaign Communication **Credits: 3.00**
 SCOM 460. Public Relations Management **Credits: 3.00**
 SCOM 461. Public Relations Campaigns **Credits: 3.00**
 SCOM 464. Communication, Culture and Sports **Credits: 3.00**
 SCOM 470. Health Communication Campaigns **Credits: 3.00**
 SCOM 471. Culture and Health Communication **Credits: 3.00**
 SCOM 472. Media and Politics **Credits: 3.00**
 or
 POSC 472. Media and Politics **Credits: 3.00**
 or
 SMAD 472. Media and Politics **Credits: 3.00**

Advanced Communication Theory and Context: Choose one: 3 Credit Hours

SCOM 413. Advanced Topics in Communication Studies **Credits: 1.00 - 6.00**
 SCOM 414. Attachment Communication **Credits: 3.00**
 SCOM 420. Feminist Rhetorics **Credits: 3.00**
 or
 WGSS 420. Feminist Rhetorics **Credits: 3.00**
 or
 WRTC 420. Feminist Rhetorics **Credits: 3.00**
 SCOM 425. Leadership Communication **Credits: 3.00**
 SCOM 431. Legal Communication **Credits: 3.00**
 SCOM 432. Senior Seminar in Conflict Analysis and Intervention **Credits: 3.00**
 SCOM 440. Family Communication **Credits: 3.00**
 SCOM 441. Oral History **Credits: 3.00**
 or
 HIST 441. Oral History **Credits: 3.00**
 SCOM 442. Advanced Topics in Advocacy Studies **Credits: 3.00**
 SCOM 448. Communication, Culture and Identity **Credits: 3.00**
 SCOM 450. Advanced Studies in Organizational Communication **Credits: 3.00**
 SCOM 453. Political Campaign Communication **Credits: 3.00**
 SCOM 460. Public Relations Management **Credits: 3.00**
 SCOM 461. Public Relations Campaigns **Credits: 3.00**
 SCOM 464. Communication, Culture and Sports **Credits: 3.00**
 SCOM 470. Health Communication Campaigns **Credits: 3.00**
 SCOM 471. Culture and Health Communication **Credits: 3.00**
 SCOM 472. Media and Politics **Credits: 3.00**
 or
 POSC 472. Media and Politics **Credits: 3.00**
 or
 SMAD 472. Media and Politics **Credits: 3.00**

Generalist Concentration 300/400-Level Electives: Choose two: 6 Credit Hours

SCOM 300/400 *Credits: 3.00*
 SCOM 300/400 *Credits: 3.00*

Generalist Concentration Total: 18 Credit Hours

Health Communication Studies Concentration

This concentration prepares students for careers in local, state, or federal health agencies, hospitals/medical practices, non-profits, health-related industry, private research groups/foundations, and health education/promotion consulting firms. Students will gain strong writing and research skills and gain knowledge in the areas of: health communication, provider-patient communication, and health campaigns.

Health Communication Concentration Core: Required Courses: 9 Credit Hours

SCOM 370. Introduction to Health Communication **Credits: 3.00**
 SCOM 468. Patient-Provider Communication **Credits: 3.00**
 SCOM 470. Health Communication Campaigns **Credits: 3.00**

Communication Skills: Choose one: 3 Credit Hours

SCOM 335. Communication Consulting **Credits: 3.00**
 SCOM 342. Argument and Advocacy **Credits: 3.00**
 SCOM 358. Business and Professional Communication Studies **Credits: 3.00**
 SCOM 447. Facilitating Public and Organizational Engagement Processes **Credits: 3.00**
 SCOM 449. Communication Training **Credits: 3.00**

Health Communication Concentration Electives: Choose two: 6 Credit Hours

SCOM 303. Special Topics in Health Communication **Credits: 3.00** (may be taken twice when topic changes)
 SCOM 320. Introduction to Interpersonal Communication **Credits: 3.00**
 SCOM 331. Communication and Conflict **Credits: 3.00**
 SCOM 345. Nonverbal Communication **Credits: 3.00**
 SCOM 350. Organizational Communication **Credits: 3.00**
 SCOM 440. Family Communication **Credits: 3.00**
 SCOM 448. Communication, Culture and Identity **Credits: 3.00**
 SCOM 471. Culture and Health Communication **Credits: 3.00**

Health Communication Studies Concentration Total: 18 Credit Hours

Interpersonal Communication Studies Concentration

Students analyze how messages are used to manage personal relationships in social and professional contexts. By examining research, theory and processes of interpersonal communication, students learn important principles for managing impressions and building rapport, identifying needs and pursuing influence goals, reducing relational uncertainty and adapting to change. Students completing the concentration learn to communicate the value of healthy relationships, are well prepared for graduate school, and develop relational skills for excelling in careers such as peer counseling, education, family and human services, sales and management, aging services, ministry and community leadership.

Interpersonal Communication Concentration Core: Required Courses: 6 Credit Hours

SCOM 320. Introduction to Interpersonal Communication **Credits: 3.00**
 SCOM 440. Family Communication **Credits: 3.00**

Communication Skills (choose one): 3 Credit Hours

SCOM 325. Small Group Communication **Credits: 3.00**
 SCOM 332. Mediation **Credits: 3.00**
 SCOM 340. Principles and Processes of Interviewing **Credits: 3.00**
 SCOM 358. Business and Professional Communication Studies **Credits: 3.00**

Communication Depth Elective: Choose one: 3 Credit Hours

SCOM 248. Intercultural Communication **Credits: 3.00**

SCOM 260. Introduction to Public Relations **Credits: 3.00**
 SCOM 334. Alternative Dispute Resolution **Credits: 3.00**
 SCOM 350. Organizational Communication **Credits: 3.00**
 SCOM 370. Introduction to Health Communication **Credits: 3.00**
 SCOM 432. Senior Seminar in Conflict Analysis and Intervention **Credits: 3.00**

Interpersonal Communication Concentration Electives: Choose two: 6 Credit Hours

SCOM 314. Communication in Romantic Relationships **Credits: 3.00**
 SCOM 330. Special Topics in Interpersonal Communication **Credits: 3.00**
 SCOM 331. Communication and Conflict **Credits: 3.00**
 SCOM 345. Nonverbal Communication **Credits: 3.00**
 SCOM 348. Communication and Gender **Credits: 3.00**
 SCOM 414. Attachment Communication **Credits: 3.00**

Interpersonal Communication Studies Concentration Total: 18 Credit Hours

Organizational Communication Studies Concentration

Organizational communication involves the study of the ways people interact within organizations, such as business, government, education and nonprofit groups. The Organizational Communication concentration offers students the knowledge and skills for organizing people, information, and ideas and provides opportunities for hands on practice. Coursework prepares students to organize productive talk, facilitate training and skill development, lead through communication, and apply theories of organizing to improve practice in the world. This concentration prepares students for careers in such things as business, consulting, training and event planning and for the study of law.

Organizational Communication Core: Required Courses: 9 Credit Hours

SCOM 350. Organizational Communication **Credits: 3.00**
 SCOM 358. Business and Professional Communication Studies **Credits: 3.00**
 SCOM 450. Advanced Studies in Organizational Communication **Credits: 3.00**

Communication Skills: Choose one: 3 Credit Hours

SCOM 447. Facilitating Public and Organizational Engagement Processes **Credits: 3.00**
 SCOM 449. Communication Training **Credits: 3.00**

Organization Communication Concentration Electives: Choose two: 6 Credit Hours

SCOM 320. Introduction to Interpersonal Communication **Credits: 3.00**
 SCOM 325. Small Group Communication **Credits: 3.00**
 SCOM 331. Communication and Conflict **Credits: 3.00**
 SCOM 345. Nonverbal Communication **Credits: 3.00**
 SCOM 347. Communication, Diversity and Popular Culture **Credits: 3.00**
 SCOM 348. Communication and Gender **Credits: 3.00**

or

WGSS 348. Communication and Gender **Credits: 3.00**

SCOM 357. Youth, Communication and Culture **Credits: 3.00**

SCOM 425. Leadership Communication **Credits: 3.00**

Organizational Communication Studies Concentration

Total: 18 Credit Hours

Public Relations Studies Concentration

This concentration focuses on the management of communication between organizations and their internal and external publics with the goal of mutual understanding and influence. Public relations practitioners work with specific audiences relative to focused goals. Preparation for a career in public relations should include a broad educational base and a variety of communication skills.

Public Relations Concentration Core: Required

Courses: 9 Credit Hours

SCOM 260. Introduction to Public Relations **Credits: 3.00**

SCOM 261. Public Relations Techniques I: Written **Credits: 3.00**

SCOM 362. Public Relations Theory and Concepts **Credits: 3.00**

Advanced Public Relations Skills: Choose one: 3

Credit Hours

SCOM 361. Public Relations Techniques II: Visual **Credits: 3.00**

SCOM 367. Advanced Public Relations Writing **Credits: 3.00**

Public Relations in Context: Choose one: 3 Credit

Hours

SCOM 363. International Public Relations **Credits: 3.00**

SCOM 365. Sports Public Relations **Credits: 3.00**

SCOM 369. Topics in Engaged Public Relations **Credits: 3.00**

SCOM 460. Public Relations Management **Credits: 3.00**

Public Relations Capstone: Choose one: 3 Credit

Hours

SCOM 461. Public Relations Campaigns **Credits: 3.00**

SCOM 462. Student-run Public Relations Firm **Credits: 3.00**

Public Relations Studies Concentration Total: 18 Credit

Hours

Recommended Schedule for Majors

Communication Studies Major Coursework

Recommended Schedule

Generally students will start their program in Communication Studies no earlier than their second semester and often at the beginning of their sophomore year. This is a suggested progression of major coursework. We recommend students take 30 credit hours per year to stay on track to meet all requirements in four years.

First Year

Declared Students (End of First-Year or Beginning of Second Year)

Declare the SCOM major on MyMadison

SCOM 240. Introduction to Communication Theory **Credits: 2.00**

SCOM 240L. Communication Theory Lab **Credits: 1.00**

Apply for the Major ¹

Research and select a minor or second major and begin coursework

Continue to fulfill all General Education Requirements

Footnote

¹ Note: Until fully-admitted, SCOM declared students may take only 9 hours of SCOM major credit.

First Year Total: 30 Credit Hours

Second Year

Complete SCOM Core Courses (9 hours)

SCOM 242. Presentational Speaking **Credits: 3.00**

SCOM 280. Introduction to Communication Research **Credits: 3.00**

SCOM 341. Persuasion **Credits: 3.00**

Begin Concentration Specific Coursework *Credits: 3.00*

Continue General Education coursework

Take requirements for B.S. Degree (*MATH 220 and Scientific Literacy requirements*) *Credits: 6.00-7.00*

Continue Minor or Second Major Coursework

Second Year Total: 30 Credit Hours

Third Year

Continue Concentration-Specific Requirements

Complete Advanced Research Methods Course

Complete General SCOM Electives

Explore internship opportunities to count for SCOM elective credit

Complete General Education coursework

Continue Minor or Second Major Coursework

Third Year Total: 30 Credit Hours

Fourth Year

Complete Concentration-Specific Requirements

Complete Minor or Second Major coursework

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Communication Studies Minor

Minor Requirements

Communication Studies Minor

A minor in communication studies requires 18 hours of course work in communication studies beyond the General Education requirement, including SCOM 240, SCOM 240L and a minimum of nine hours at the 300 level and three hours at the 400 level. Before a student begins a minor in communication studies, the school director and the student's adviser must approve his/her planned program of study.

Admission to the Minor

Admission to JMU does not guarantee admission to a minor in the School of Communication Studies. All students interested in minoring in the program must apply for a limited number of spaces while first completing SCOM 240 and SCOM 240L. In order to register for these classes, students must first declare the SCOM minor online. The School of Communication Studies reviews applications for admission to the minor each semester. Students must submit their applications (which can be accessed from the SCOM website and submitted by email) in the semester in which they are completing the SCOM 240 and SCOM 240L requirements. Applications are due by November 15 (fall semester) and April 15 (spring semester). Students who have applied will be notified of the department's admission decision at the end of the semester in which they complete the SCOM 240 and SCOM 240L requirements.

Admission to an SCOM minor is based on availability to the most qualified students as determined by performance in SCOM 240 and SCOM 240L.

Students who are not admitted may file one more additional application in the next regular semester. Students reapplying must apply in two consecutive semesters of enrollment at the university. If a student reapplies after retaking SCOM 240 and SCOM 240L (whether repeat or repeat/forgive), the school will look only at their highest grades earned when evaluating their second application.

Successful completion of any minor in the School of Communication Studies requires, at the very least, a minimum of two semesters after a student is fully admitted to the School. Depending upon the student's particular circumstances and degree progress, more than two semesters may be required for completing the minor. Once admitted to the School of Communication Studies, a student cannot retroactively apply more than nine hours of SCOM courses, including SCOM 240 and SCOM 240L, to his/her minor. Also, once admitted to an SCOM minor, a student cannot automatically transfer into the SCOM major without reapplying in a subsequent semester, and there is no guarantee of acceptance.

Cultural Communication Minor

The minor in cultural communication is designed to provide students with principles and theories of communication processes that help explain dynamics of intercultural interactions in personal and professional contexts. The program is intended for students not majoring in communication studies who wish to augment their major area of study, develop skills of cultural competence and increase their awareness of diversity.

Admission to the Minor

Admission to JMU does not guarantee admission to a minor in the School of Communication Studies. All students interested in minoring in the program must apply for a limited number of spaces while first completing SCOM 240 and SCOM 240L. In order to register for these classes, students must first submit their application for an SCOM minor. Applications can be accessed on the SCOM website and must be submitted by email. The School of Communication Studies reviews applications for admission to the minor each semester. Students who have applied will be notified of the department's admission decision at the end of the semester in which they complete the SCOM 240 and SCOM 240L requirements.

Admission to an SCOM minor is based on availability to the most qualified students as determined by performance in SCOM 240 and SCOM 240L.

Students who are not admitted may file one more additional application in the next regular semester. Students reapplying must apply in two consecutive semesters of enrollment at the university. If a student reapplies after retaking SCOM 240 and SCOM 240L (whether repeat or repeat/forgive), the school will look only at their highest grades earned when evaluating their second application.

Successful completion of any minor in the School of Communication Studies requires, at the very least, a minimum of two semesters after a student is fully admitted to the School. Depending upon the student's particular circumstances and degree progress, more than two semesters may be required for completing the minor. Once admitted to the School of Communication Studies, a student cannot retroactively apply more than nine hours of SCOM courses, including SCOM 240 and SCOM 240L, to his/her minor. Also, once admitted to an SCOM minor, a student cannot automatically transfer into the SCOM major without reapplying in a subsequent semester, and there is no guarantee of acceptance.

Courses

SCOM 240. Introduction to Communication Theory **Credits: 2.00**

SCOM 240L. Communication Theory Lab **Credits: 1.00**

SCOM 248. Intercultural Communication **Credits: 3.00**

SCOM 349. Ethnographic Approaches to Communication Studies **Credits: 3.00**

SCOM 448. Communication, Culture and Identity **Credits: 3.00**

Choose two: 6 Credit Hours

SCOM 305. Language and Culture **Credits: 3.00**

SCOM 347. Communication, Diversity and Popular Culture **Credits: 3.00**

SCOM 348. Communication and Gender **Credits: 3.00**

or
WGSS 348. Communication and Gender **Credits: 3.00**

SCOM 352. Communication and Social Movements **Credits: 3.00**
SCOM 355. Food as Communication **Credits: 3.00**

SCOM 357. Youth, Communication and Culture **Credits: 3.00**
or
SMAD 357. Youth, Communication and Culture **Credits: 3.00**

Total: 18 Credit Hours

Health Communication Minor

The minor in health communication is designed for students who are interested in working in health care or related fields and are completing coursework in areas such as nursing, health sciences and the pre-professional programs. The minor offers students flexibility in terms of area of focus for the minor, so that they can gain the most applicable knowledge for their future endeavors.

Minor Requirements

Admission to the Minor

Admission to JMU does not guarantee admission to a minor in the School of Communication Studies. All students interested in minoring in the program must apply for a limited number of spaces while first completing SCOM 240 and SCOM 240L. In order to register for these classes, students must first submit their application for an SCOM minor. Applications can be accessed on the SCOM website and must be submitted by email. The School of Communication Studies reviews applications for admission to the minor each semester. Students who have applied will be notified of the department's admission decision at the end of the semester in which they complete the SCOM 240 and SCOM 240L requirements.

Admission to an SCOM minor is based on availability to the most qualified students as determined by performance in SCOM 240 and SCOM 240L.

Students who are not admitted may file one more additional application in the next regular semester. Students reapplying must apply in two consecutive semesters of enrollment at the university. If a student reapplies after retaking SCOM 240 and SCOM 240L (whether repeat or repeat/forgive), the school will look only at their highest grades earned when evaluating their second application.

Successful completion of any minor in the School of Communication Studies requires, at the very least, a minimum of two semesters after a student is fully admitted to the School. Depending upon the student's particular circumstances and degree progress, more than two semesters may be required for completing the minor. Once admitted to the School of Communication Studies, a student cannot retroactively apply more than nine hours of SCOM courses, including SCOM 240 and SCOM 240L, to his/her minor. Also, once admitted to an SCOM minor, a student cannot automatically transfer into the SCOM major without reapplying in a subsequent semester, and there is no guarantee of acceptance.

Health Communication Minor Courses

Required Courses: 6 Credit Hours

SCOM 240. Introduction to Communication Theory **Credits: 2.00**
SCOM 240L. Communication Theory Lab **Credits: 1.00**
SCOM 370. Introduction to Health Communication **Credits: 3.00**

Choose Four of the Following Courses: 12 Credit Hours

SCOM 303. Special Topics in Health Communication **Credits: 3.00**
SCOM 320. Introduction to Interpersonal Communication **Credits: 3.00**
SCOM 342. Argument and Advocacy **Credits: 3.00**
SCOM 350. Organizational Communication **Credits: 3.00**
SCOM 358. Business and Professional Communication Studies **Credits: 3.00**
SCOM 440. Family Communication **Credits: 3.00**
SCOM 468. Patient-Provider Communication **Credits: 3.00**
SCOM 470. Health Communication Campaigns **Credits: 3.00**
SCOM 471. Culture and Health Communication **Credits: 3.00**
SCOM 300/400 *3.00 Credit Hours*

Total: 18 Credit Hours

Department of Computer Information Systems and Business Analytics

Rhonda A. Syler, **Head**

Location: Zane Showker Hall, Room 5036

Website: <http://www.jmu.edu/cob/cis>

Professors

M. Busing, T. Dillon, C. Guo, R. Pal, S. Stevens, P. Wang

Associate Professors

D. Babik, A. Connolly, J. Ezell, J. May, R. Syler, E. Torabi, B. Vaziri

Assistant Professors

A. Ay, P. Balozian, D. Liu, L. Mutchler, L. Novoa, E. Teymourian, H. Yekta, Y. Zhong

Senior Lecturers

C. Cole

Lecturers

L. Atkins, J. Jewett, S. Lough, L. Tchommo

Mission Statement

The Department of Computer Information Systems and Business Analytics is committed to:

Educating students by creating an active, experiential learning environment that prepares them to apply knowledge of information systems, operations, business analytics and information and cybersecurity management for the betterment of organizations and society; and

Serving the academic community and business communities through appropriate research and service.

Objectives

Computer information systems (CIS) is offered as a major through the Department of Computer Information Systems and Business Analytics. This program prepares business students for careers as information systems professionals. The program of study focuses on the development and management of information systems in a business environment. Students develop the technical skills and organizational insights required to analyze, design, implement and administer information systems. The CIS curriculum includes hands-on projects, laboratory exercises, case analysis and business simulations to build strong technical and analytical skills, effective oral and written communication skills, and the ability to work independently and in team-oriented environments. Students are offered the opportunity to gain practical experience through internships. The department faculty endorses the program educational objectives listed below.

The CIS B.B.A. program will produce graduates with the ability to:

- Exhibit leadership in a role as subject matter expert or consultant.
- Exhibit confidence in combining technical, business, and interpersonal skills to innovate and solve problems in a team environment.
- Effectively adapt and apply changing technology to business opportunities and challenges.
- Work effectively in the IS field to make a positive contribution to society.

Career Opportunities

Computer information systems professionals analyze business opportunities and problems, then design and build solutions using the power of information technologies. Students in the CIS program gain the business and technical skills that prepare them to move quickly from technical to leadership roles within the organization.

Consultant
Business Analyst
Business Analytics Specialist
Business Intelligence Specialist
Computer Forensics Specialist
IT/IS Auditor
IT/IS Consultant
Risk Analyst
Security Consultant
Systems Analyst
Telecommunications Analyst
IT/IS Manager

Application Development Manager
Business Owner (IT/IS Industry)
Chief Information Officer
Chief Security Officer
Data Warehousing Manager
Information Systems Manager
Program Manager
Project Manager
IT Operations Professional
Database Administrator
Information Technology Trainer
Network and Systems Administrator
Security Specialist
Software Engineer
Web Developer

Co-curricular Activities and Organizations

The JMU Chapter of the Association for Information Systems (AIS), a national professional organization, was founded in 2014 and serves to advance knowledge and to promote excellence in the practice and study of information systems. Along with providing premier networking opportunities with top consulting firms, AIS provides student members opportunities to engage in national student competitions, in-house tutoring activities, professional development workshops, and various fundraising and social events.

Accreditation

The B.B.A. in computer information systems is accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>.

Computer Information Systems, B.B.A.

Program Description

The B.B.A. in computer information systems requires a minimum of 120 credit hours of undergraduate work. Sixty credit hours will be taken outside the College of Business. In counting the 60 credit hours of non-business courses, B.B.A. students may include all hours taken in General Education (usually 41), up to a total of nine hours in economics and three hours of COB 191. The remaining hours will be taken from any department outside the College of Business. Students should carefully select these courses to help them gain additional knowledge and expertise for their careers and personal lives.

Admission Requirements

Admission to the Business Analytics concentration of the Computer Information Systems major is limited and competitive. Students seeking admission to the Business Analytics concentration must submit an application by the posted application deadlines. Students will be admitted as a cohort to start the BSAN courses in the spring.

To be eligible to apply for admission to the Business Analytics concentration of the Computer Information Systems major, students must have completed the following:

- One introductory calculus course (MATH 205, MATH 231, MATH 235, ISAT 151 or equivalent)
 - One statistics course (COB 191, MATH 220, MATH 285, MATH 318, ISAT 251 or equivalent)
 - One economics course (ECON 200 or ECON 201)
 - One business analytics course (COB 291) with a minimum grade of "B-"
- In addition, a student must be able to take the 300-level BSAN courses on a schedule of one per semester in a three-consecutive semester period.

A complete application to the Business Analytics concentration includes the following:

- A completed BSAN concentration application form
 - A letter of recommendation from COB 291 instructor
- Students may use transfer and/or college credits that have been accepted by JMU to meet competency requirements. Admission is based on an average of a student's highest grades in one course from each competency area and the letter of recommendation. Only grades earned at JMU and verified by the registrar will be used; transfer transcripts will also be reviewed. More emphasis will be placed on grades than on the recommendation letter. Following review by the BSAN Admission Committee, students will be notified about their acceptance into the concentration. If accepted, students will be eligible to register for BSAN courses.

Degree and Major Requirements

Degree Requirements	Credit Hours
B.B.A. core courses ¹	39
CIS major requirements	28
General Education courses ²	41
Non-business electives ³	12
Total	120

Footnotes

¹ Assumes that MATH 205 and ECON 200 are taken as General Education courses.

² The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.

³ Credit hours may vary. See adviser for details.

Major Requirements

Students planning to major in Computer Information System (CIS) must complete the 27-28 hours of lower-division B.B.A. core curriculum prior to enrolling in upper-division core courses normally taken in the first semester of

their junior year. It is expected that the lower-division core curriculum will be completed during the first two years of study along with most of the university general education curriculum. Failing to complete all the lower-division core requirements on time will delay enrollment in upper-division core and major courses.

Required Core Courses

- CIS 221. Principles of Programming **Credits: 3.00**
- CIS 304. Enterprise Architecture **Credits: 3.00**
- CIS 330. Database Design and Application **Credits: 3.00**
- CIS 331. Intermediate Computer Programming **Credits: 3.00**
- CIS 454. Systems Analysis and Design **Credits: 3.00**

Major Requirements Total: 15 Credit Hours

B.B.A. Core Component

B.B.A. Lower-Level Core Component

B.B.A. majors must complete all of the B.B.A. core components as part of their degree program. The following courses comprise the B.B.A. Lower-Level Core Component:

- COB 191. Business Analytics I **Credits: 3.00** ¹
- COB 202. Interpersonal Skills **Credits: 3.00**
- COB 204. Computer Information Systems **Credits: 3.00**
- COB 241. Financial Accounting **Credits: 3.00**
- COB 242. Managerial Accounting **Credits: 3.00** ^{4,5}
- COB 291. Business Analytics II **Credits: 3.00** ²
- ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**
- ECON 201. Introduction to Microeconomics **Credits: 3.00**
- MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00** ³
- or
- MATH 235. Calculus I [C3QR] **Credits: 4.00** ³

B.B.A. Upper-Level Core Component

The following courses comprise the B.B.A. Upper-Level Core Component:

- COB 300A. Integrative Business: Management **Credits: 3.00** ^{5,6}
- COB 300B. Integrative Business: Finance **Credits: 3.00** ^{5,6}
- COB 300C. Integrative Business: Operations **Credits: 3.00** ^{5,6}
- COB 300D. Integrative Business: Marketing **Credits: 3.00** ^{5,6}
- COB 318. Legal and Ethical Environment of Business **Credits: 3.00** ⁷
- COB 487. Strategic Management **Credits: 3.00** ⁸

Footnotes

¹ MATH 220 may be substituted for COB 191.

² COB 191 or equivalent and MATH 205 or equivalent are prerequisites for COB 291.

³ Calculus is required but not used in calculating the B.B.A. core GPA. Students may substitute MATH 231, MATH 233 or ISAT 151 to fulfill the calculus

requirement. MATH 235 is preferred for Economics and Finance majors.

⁴ COB 241 must be taken before COB 242.

⁵ COB 242 is a prerequisite for COB 300 but is not used in calculating the B.B.A. core GPA.

⁶ All four COB 300 courses must be taken during the same semester.

⁷ COB 300 is a prerequisite or corequisite for COB 318. COB 318 is a prerequisite for COB 487 and BLAW 497.

⁸ COB 487 must be taken during the senior year.

Required Concentration

Computer Information System majors must choose one of the following options to complete the required courses in the CIS major:

Option 1: **Information Systems Concentration**, complete five CIS core courses and five courses required for the concentration.

Option 2: **Business Analytics Concentration**, complete the five CIS core courses and four courses required in the concentration. (Admission to the BSAN program is limited and competitive. CIS majors interested in pursuing the BSAN concentration must submit an application for admission by the posted application deadlines in the pool with students applying for the BSAN minor.)

Option 3: **Information and Cybersecurity Management Concentration**, complete five CIS core courses and five courses (13 hours) required for the concentration.

Business Analytics Concentration

Business analytics is a technical approach to analyzing problems and making business-related decisions. It uses statistical methods, management science techniques, machine learning and mathematical modeling to forecast the implications of various choices and identify the best alternatives. Business analytics focuses on the effective use of data and information to provide fact-based insights and drive positive business actions. Combined with the ability to analyze, design and implement information system, including applications and databases, the computer information systems major with a concentration in business analytics prepares students for careers in consulting, business analysis and data analysis. Students enrolled in the business analytics concentration of the computer information systems major are not permitted to earn a minor in business analytics. However, students enrolled in the business analytics concentration may switch to the information systems concentration of the computer information systems major. After the switch, such students may pursue business analytics minor provided they meet prerequisite requirements of the 300-level BSAN courses offered on a schedule of one per semester in a three-consecutive semester period.

Required Courses

BSAN 390. Statistical Modeling for Business Analytics **Credits: 3.00**

BSAN 391. Decision Modeling for Business Analytics **Credits: 3.00**

BSAN 393. Data Mining for Business Analytics **Credits: 3.00**

or

CIS 393. Data Mining for Business Analytics **Credits: 3.00**

CIS 463. Business Intelligence **Credits: 3.00**

Business Analytics Concentration Total: 12 Credit Hours

Information Systems Concentration

The information systems concentration prepares students to analyze, design and implement information system, including applications, databases, networks and architectures. Elective courses allow students to acquire more detailed knowledge in security, project management, web development and consulting. The computer information systems major with a concentration in information systems prepares students for careers in consulting, business analysis, data analysis and systems analysis.

Required Courses

CIS 301. Cloud Server Management **Credits: 1.00**

CIS 320. Computing and Telecommunications Networks **Credits: 3.00**

CIS 484. Information Systems Development and Implementation **Credits: 3.00**

CIS Electives **Credits: 6.00**

Information Systems Concentration Electives

Students majoring in CIS are highly encouraged to complete an internship in computer information systems between their junior and senior years for non-academic credit (CIS 361).

CIS 354. Advanced Visual Basic Programming **Credits: 3.00**

CIS 366. Web Design and Development **Credits: 3.00**

CIS 393. Data Mining for Business Analytics **Credits: 3.00**

or

BSAN 393. Data Mining for Business Analytics **Credits: 3.00**

CIS 420. Computer-Based Networking **Credits: 3.00**

CIS 424. Computer Security Management **Credits: 3.00**

CIS 425. Defensive Cybersecurity **Credits: 3.00**

CIS 428. Mobile Computing and Security **Credits: 3.00**

CIS 434. Information Technology Consulting **Credits: 3.00**

CIS 464. Information Systems Project Management **Credits: 3.00**

CIS 490. Special Studies in Computer Information Systems or Business Analytics **Credits: 1.00 - 3.00**

CIS 498. Special Topics in Computer Information Systems **Credits: 1.00-3.00**

Information Systems Concentration Total: 13 Credit Hours

Information and Cybersecurity Management Concentration

The Information and Cybersecurity Management concentration prepares students to help organizations protect data/information assets and information systems. Students will learn to detect and respond to threats and assess risks and vulnerabilities while ensuring confidentiality, integrity, and availability of organizational data and systems. Students will learn techniques and industry best practices of risk assessment, incident response, and continuity planning. Program objectives also include developing an understanding of behavioral,

legal, privacy, and ethical considerations of data and information systems protection. The Computer Information Systems major with a concentration in Information and Cybersecurity Management prepares students for careers in information security analysis, incident response, risk and vulnerability analysis, continuity planning, computer forensics, cybersecurity governance, and cybersecurity consulting.

CIS 301. Cloud Server Management **Credits: 1.00**

CIS 320. Computing and Telecommunications Networks **Credits: 3.00**

CIS 424. Computer Security Management **Credits: 3.00**

CIS 425. Defensive Cybersecurity **Credits: 3.00**

CIS Electives from approved elective list below **Credits: 3.00**

Information and Cybersecurity Management Concentration Electives

Students majoring in CIS are highly encouraged to complete an internship in computer information systems between their junior and senior years for non-academic credit (CIS 361).

CIS 420. Computer-Based Networking **Credits: 3.00**

CIS 428. Mobile Computing and Security **Credits: 3.00**

CIS 434. Information Technology Consulting **Credits: 3.00**

CIS 464. Information Systems Project Management **Credits: 3.00**

CIS 498. Special Topics in Computer Information Systems **Credits: 1.00-3.00**¹

Information and Cybersecurity Management Concentration Total: 13 Credit Hours

Footnote

¹ CIS 498 topic must be related to cybersecurity and approved by CIS-BSAN Department Head.

Cooperative Education Concentration

Coordinator: Tom Dillon

The optional cooperative education concentration in CIS major offers highly qualified undergraduate majors the opportunity to participate in a six- to eight-month professional experience with well-recognized industry leaders in information technology and operations. Students will be awarded 12 hours of academic credit that will substitute for two required courses in the CIS curriculum and for six credits of special topics (CIS 498). Substitution for the two specific courses will be made based on the structure and context of the co-op experience and in cooperation with the co-op firm.

Students must demonstrate competency via examination in the two required courses selected in order to receive credit in those courses. Students who have at least a 3.0 GPA, are majors in CIS and have fulfilled all of their COB core requirements (COB 487) are eligible to apply on a competitive basis through the CIS & BSAN department.

Students who wish to participate in a co-op program must apply both to the CIS & BSAN department office and the participating firm at least three months

in advance of the start of the co-op. Co-ops typically begin in January or May and last six to eight months. Course substitutions must be approved in conjunction with the co-op coordinator in the CIS & BSAN department and the co-op coordinator in the firm.

A program of study must be placed on file for each student who is accepted for a co-op prior to beginning the co-op experience. Students may participate in a co-op during their junior or senior years, but they are limited to one co-op. Students who want to participate in a co-op as postgraduates may do so as special students. These students will receive a certificate on successful completion of the co-op experience. *Prerequisite: CIS majors with junior standing and a minimum 3.0 grade point average.*

Recommended Schedule for Majors

Computer information systems majors should follow the course schedule described here to complete the final two years of their program. It is possible to deviate from this program, but care must be taken to ensure that all course prerequisites are met.

First Two Years

Students normally take the lower-division B.B.A. core curriculum along with many of the General Education curriculum. All lower-division core requirements must be completed before enrolling in the upper-division core courses. It is recommended that CIS 221 be completed in the second semester of the second year.

Third Year - First Semester *

Students who are able to complete B.B.A. core requirements early enough to take COB 300 in the second semester of the second year should take additional CIS courses in the first semester of the third year and subsequent semesters. Consult your adviser.

COB 300A. Integrative Business: Management **Credits: 3.00**

COB 300B. Integrative Business: Finance **Credits: 3.00**

COB 300C. Integrative Business: Operations **Credits: 3.00**

COB 300D. Integrative Business: Marketing **Credits: 3.00**

CIS 304. Enterprise Architecture **Credits: 3.00**

Third Year - First Semester Total: 15 Credit Hours

Third Year - Second Semester *

BSAN 390. Statistical Modeling for Business Analytics **Credits: 3.00**

CIS 330. Database Design and Application **Credits: 3.00**

COB 318. Legal and Ethical Environment of Business **Credits: 3.00**

Third Year - Second Semester Total: 9 Credit Hours

Fourth Year - First Semester *

BSAN 391. Decision Modeling for Business Analytics **Credits: 3.00**

CIS 331. Intermediate Computer Programming **Credits: 3.00**
CIS 361. Computer Information Systems Internship **Credits: 0.00**
CIS 454. Systems Analysis and Design **Credits: 3.00**

Fourth Year - First Semester Total: 12 Credit Hours

Fourth Year - Second Semester *

Students majoring in CIS are highly encouraged to complete an internship in computer information systems for non-academic credit (CIS 361).

CIS 393. Data Mining for Business Analytics **Credits: 3.00**
or
BSAN 393. Data Mining for Business Analytics **Credits: 3.00**
CIS 463. Business Intelligence **Credits: 3.00**
COB 487. Strategic Management **Credits: 3.00**

Fourth Year - Second Semester Total: 9 Hours

Program Total: 120 Credit Hours

Business Analytics Minor

Business analytics is a technical approach to analyzing problems and making business-related decisions. It uses statistical methods, management science techniques and mathematical modeling to forecast the implications of various choices and identify the best alternatives. Business analytics focuses on the effective use of data and information to provide fact-based insights and drive positive business actions. The minor in business analytics prepares students to solve complex decision problems in a business environment with a combination of quantitative skills and hands-on expertise using current software applications. Students enrolled in the business analytics minor are not permitted to pursue the business analytics concentration of the computer information systems major.

Special Admission Requirements

Admission to the BSAN program is limited and competitive. Students seeking to add the BSAN minor must submit an application **by the announced date**. Students will be admitted as a cohort each fall to start the BSAN program in the spring.

To be eligible to apply for admission, students must have completed the following:

One introductory calculus course (MATH 205, MATH 231, MATH 235, ISAT 151 or equivalent)
One statistics course (COB 191, MATH 220, MATH 285, MATH 318, ISAT 251 or equivalent)
One economics course (ECON 200 or ECON 201)
One business analytics course (COB 291) with a minimum grade of "B-"
In addition, a student must be able to take the 300-level BSAN courses on a schedule of one per semester in a three-consecutive semester period.

A complete application to the minor includes the following:

A completed BSAN minor application form
A letter of recommendation from COB 291 instructor
Students may use transfer and/or college credits that have been accepted by JMU to meet competency requirements. Admission is based on an average of a student's highest grades in one course from each competency area and the letter of recommendation. Only grades earned at JMU and verified by the registrar will be used; transfer transcripts will also be reviewed. More emphasis will be placed on grades than on the recommendation letter. Following review by the BSAN Admission Committee, students will be notified about their acceptance into the minor. If accepted, students will be eligible to register for BSAN courses.

Required Courses

Choose one of the following: 3-4 Credit Hours

COB 191. Business Analytics I **Credits: 3.00**
ISAT 251. Topics in Applied Statistics in ISAT [C3QR] **Credits: 3.00**
MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**
MATH 285. Data Analysis **Credits: 4.00**
MATH 318. Introduction to Probability and Statistics **Credits: 4.00**

Other Required Courses

COB 291. Business Analytics II **Credits: 3.00**¹
BSAN 390. Statistical Modeling for Business Analytics **Credits: 3.00**
BSAN 391. Decision Modeling for Business Analytics **Credits: 3.00**
BSAN 393. Data Mining for Business Analytics **Credits: 3.00**
or
CIS 393. Data Mining for Business Analytics **Credits: 3.00**

Elective - Choose one of the following: 3 Credit Hours

BSAN 498. Special Topics in Business Analytics **Credits: 3.00**
CIS 463. Business Intelligence **Credits: 3.00**
ISAT 344. Intelligent Systems **Credits: 3.00**
ECON 385. Econometrics **Credits: 3.00**
FIN 475. Financial Modeling and Risk Analysis **Credits: 3.00**
MATH 322. Applied Linear Regression **Credits: 3.00**
MKTG 482. Marketing Analytics **Credits: 3.00**

Total: 18-19 Credit Hours

Footnote

¹ COB 191 and MATH 205 or equivalent are prerequisites for COB 291. A grade of "B-" or higher in COB 291 and junior or senior standing are prerequisites for taking the subsequent required courses (BSAN 390, BSAN 391, and BSAN 393/CIS 393) in the business analytics minor.

Computer Information Systems Minor

Special Admission Requirements

The minor in computer information systems is structured to provide students in various disciplines on campus with the opportunity to study business-oriented information systems.

Admission to the CIS minor is based on a student's performance in one course from each of the following seven competency areas:

- One introductory information-systems course (COB 204 or equivalent as determined by the department head)
- One introductory computer programming course (CIS 221, ISAT 252, CS 149, CS 159, IA 241 or equivalent as determined by the department head)
- One calculus course (MATH 205, MATH 231, MATH 235, ISAT 151 or equivalent as determined by the department head)
- One statistics course (COB 191, MATH 220 or equivalent as determined by the department head)
- One critical thinking course (student's Cluster One critical thinking course or equivalent as determined by the department head)
- One writing course (WRTC 103 or equivalent as determined by the department head)
- One quantitatively oriented economics/business course (ECON 200, ECON 201, COB 241, COB 242, COB 291 or equivalent as determined by the department head)

Admission is based on weighted average of student's highest grades in one course from each of the seven competency areas and is subject to space availability of CIS courses. Students seeking to add the CIS minor must submit an application to the Department of Computer Information Systems and Business Analytics department when they have completed, or are currently completing, all seven classes on the application. Applications are accepted three times each year.

Required Courses

COB 204. Computer Information Systems **Credits: 3.00**
CIS 221. Principles of Programming **Credits: 3.00**¹
CIS 304. Enterprise Architecture **Credits: 3.00**
CIS 330. Database Design and Application **Credits: 3.00**²
CIS 454. Systems Analysis and Design **Credits: 3.00**
CIS elective **Credits: 3.00**

Total: 18 Credit Hours

Footnote

¹ CS 149 or ISAT 252 or IA 241 with a grade of "C" or better or enrollment in CS 159 may be substituted for CIS 221.

² CS 374 may be substituted for CIS 330. CS 374 is only available to fully admitted computer science majors or minors.

Department of Computer Science

Sharon J. Simmons, **Department Head**

Phone: (540) 568-3335

Email: simmonsj@jmu.edu

Location: King Hall, Room 222

Website: <http://www.jmu.edu/cise/cs>

Professors

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Associate Professors

M. Aboutabl, J. Bowers, S. El-Tawab, C. Johnson, M. Kirkpatrick, M. Lam, M. Rizvi, A. Salman

Assistant Professors

P. Belsare, S. Bhaskar, Z. Duan, S. Lee, K. Molloy, C. Shrestha, M. Stewart, I. Wang

Lecturers

P. Riley

Mission

The computer science department strives to be an intellectual community that continually explores the broad field of computing, applies this knowledge to solve problems in a variety of domains and engages with the profession and society at large. Undergraduates join this community when they become majors, participating with faculty and other students in exploring computing through classes, projects, clubs and internships.

Goals

The goals of the computer science department are to:

Offer small classes that provide opportunities for personal interaction with students.

Provide a broad, inclusive and up-to-date computing curriculum.

Provide students opportunities for professional and community engagement and real world experiences.

Help students to become computing problem solvers and good communicators.

Produce graduates who will succeed in the computing profession.

Career Opportunities and Marketable Skills

Computing technology pervades modern society and demand for computing professionals is strong and projected to remain strong for the foreseeable future. Careers in computing range from technical positions specifying, designing, building and maintaining networks and systems of all kinds, through project leadership and technical management. The computer science major prepares students for entry-level technical positions as programmers, software

developers, requirements analysts, software designers, testers, software quality assurance professionals, system architects, network engineers, information security specialists and computing consultants.

Co-curricular Activities and Organizations

The James Madison University Student Chapter of the Association for Computing Machinery is the local student chapter of the national association for computing professionals.

The JMU chapter of Upsilon Pi Epsilon, the international honor society in computer science, recognizes outstanding academic achievement by students and outstanding contributions to education by faculty. The department also sponsors the Robotics, Cyber Defense and Women in Technology clubs.

Students are encouraged to intern in a business or government organization during the summer.

Cross Disciplinary Minor

Robotics Minor

Admission and Retention Requirements

Information on admission to programs within the Department of Computer Science, retention and minimum grade requirements may be found on the individual program pages listed below:

Computer Science, B.S.

Admission Requirements

Any student may declare a CS major or minor, but students may enroll in CS courses beyond CS 149, CS 159 and CS 227/CS 227 only if they are fully admitted to the CS major or minor. Full admission to the major or minor is granted as described below.

Students who have attempted CS 149, CS 159 or CS 227/MATH 227 at JMU may not attempt them elsewhere (that is, they must make any second attempts at JMU).

Students must submit an application for full admission to the CS major or minor no earlier than the semester in which they complete CS 159.

Students with a GPA of 3.0 or better in CS 149 and CS 159, and who have attempted CS 159 only once, are guaranteed full admission to the major or minor. Others will be granted full admission to the CS major or minor as space permits based on their GPA in CS 149 and CS 159 and faculty evaluation of their potential to succeed in the CS major or minor.

Students who have completed the CS minor may apply for full admission to the CS major no earlier than the semester in which they complete the last course in the CS minor.

CS minors with a GPA of 3.0 or higher in the CS minor will be fully admitted to the CS major; others will be admitted as space permits based on their minor GPA.

Students will be notified of their CS major or minor admission status no later than January 1st for admission in the spring semester (following application the previous fall semester), and no later than May 31st for

admission in the fall semester (following application the previous spring semester).

Students who are not granted full admission to the CS major or minor may file one additional application in the next regular semester after they are denied admission.

Transfer students who have completed the equivalent of CS 159 (or for whom this class is waived) are granted full admission to the CS major or minor. Other transfer students are subject to same process as non-transfer students.

Progressing in the Major

Students may enroll in each of CS 149, CS 159, CS 240 and CS 261 at most twice. Most CS courses require a minimum grade of "C-" (minimum of "B-" in CS 149) in prerequisite courses, including those taken in the Department of Mathematics and Statistics. Students must achieve a minimum cumulative grade point average of 2.0 in all courses used to satisfy CS major degree requirements.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement (in addition to General Education)	3
Major requirements (listed below)	49-52
University electives	24-27
Total	120

Footnote

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

Major Requirements

CS 149. Introduction to Programming **Credits: 3.00**
CS 159. Advanced Programming **Credits: 3.00**
CS 240. Algorithms and Data Structures **Credits: 3.00**
CS 261. Computer Systems I **Credits: 3.00**
CS 327. Discrete Structures II **Credits: 3.00**
CS 345. Software Engineering **Credits: 3.00**
CS 361. Computer Systems II **Credits: 3.00**
CS 430. Programming Languages **Credits: 3.00**
Computer Science electives above CS 300, with at least two above CS 332 **Credits: 9.00**

Choose one introductory discrete math course: 3 Credit Hours

CS 227. Discrete Structures I **Credits: 3.00**

or
MATH 227. Discrete Structures I **Credits: 3.00**
or
MATH 245. Discrete Mathematics **Credits: 3.00**

Choose one calculus sequence: 4-6 Credit Hours

MATH 235. Calculus I [C3QR] **Credits: 4.00**
or
MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00 and**
MATH 232. Calculus with Functions II **Credits: 3.00**

Choose one statistics course: 3-4 Credit Hours

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**
MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**
MATH 318. Introduction to Probability and Statistics **Credits: 4.00**

Choose one algorithms course: 3 Credit Hours

CS 412. Applied Algorithms **Credits: 3.00**
CS 452. Design and Analysis of Algorithms **Credits: 3.00**

Choose one systems elective: 3 Credit Hours

CS 432. Compilers **Credits: 3.00**
CS 450. Operating Systems **Credits: 3.00**
CS 455. Advanced Computer Networking **Credits: 3.00**
CS 456. Computer Architecture **Credits: 3.00**
CS 470. Parallel and Distributed Systems **Credits: 3.00**

Major Requirements Total: 49-52 Credit Hours

Additional Information

The credit/no-credit option may not be applied to any courses specifically listed above, nor may that option be applied to computer science electives

Certificates

Periodically, the department may offer a collection of two or more advanced courses in a particular area of study.

Students successfully completing those courses will obtain a certificate in that area of study. Examples of possible certificate programs include networking, software engineering and information security.

U.S. Government Requirements for Computer Scientists

The U.S. government standard for occupational category GS- 1550: Computer Science Series includes a requirement of 15 hours in statistics and mathematics including differential and integral calculus. This means that students considering a career as a computer scientist with the U.S. government

(including DoD, NASA, etc.) must complete more math courses than the minimum requirement for a B.S. degree. Recommended calculus sequences for these students are MATH 235-MATH 236 or MATH 231- MATH 232-MATH 236. However, only the U.S. Office of Personnel Management can give final approval of individual qualifications.

Recommended Schedule for Majors

This is just an illustration of a path through our curriculum.

First Year

First Year - Fall Semester

CS 101. Introduction to Computer Science **Credits: 3.00 (optional)**
MATH 155. College Algebra **Credits: 3.00**
General Education course **Credits: 3.00**
General Education course **Credits: 3.00**
General Education course **Credits: 3.00**

First Year - Fall Semester Total: 15 Credit Hours

First Year - Spring Semester

CS 149. Introduction to Programming **Credits: 3.00**
MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**¹
General Education course **Credits: 3.00**
General Education course **Credits: 3.00**
Elective **Credits: 3.00**

First Year - Spring Semester Total: 15 Credit Hours

First Year Total: 30 Credit Hours

Second Year

Second Year - Fall Semester

CS 159. Advanced Programming **Credits: 3.00**
CS 227. Discrete Structures I **Credits: 3.00**
MATH 232. Calculus with Functions II **Credits: 3.00**²
General Education course **Credits: 3.00**
Elective **Credits: 3.00**

Second Year - Fall Semester Total: 15 Credit Hours

Second Year - Spring Semester

CS 240. Algorithms and Data Structures **Credits: 3.00**
CS 345. Software Engineering **Credits: 3.00**
MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**²
General Education course **Credits: 3.00**
Elective **Credits: 3.00**

Second Year – Spring Semester Total: 15 Credit Hours

Second Year Total: 30 Credit Hours

Third Year

Third Year – Fall Semester

CS 261. Computer Systems I **Credits:** 3.00
CS 327. Discrete Structures II **Credits:** 3.00
General Education course **Credits:** 3.00
General Education course **Credits:** 3.00
Elective *Credits:* 3.00

Third Year – Fall Semester Total: 15 Credit Hours

Third Year – Spring Semester

CS 361. Computer Systems II **Credits:** 3.00
CS 430. Programming Languages **Credits:** 3.00
CS Elective *Credits:* 3.00
General Education course **Credits:** 3.00
Elective *Credits:* 3.00

Third Year – Spring Semester Total: 15 Credit Hours

Third Year Total: 30 Credit Hours

Fourth Year

Fourth Year – Fall Semester

CS System Elective **Credits:** 3.00
CS Elective **Credits:** 3.00
General Education course *Credits:* 3.00
Elective **Credits:** 3.00
Elective **Credits:** 3.00

Fourth Year – Fall Semester Total: 15 Credit Hours

Fourth Year – Spring Semester

CS Algorithm Elective **Credits:** 3.00
CS Elective **Credits:** 3.00
General Education course *Credits:* 3.00
Elective **Credits:** 3.00
Elective **Credits:** 3.00

Fourth Year – Spring Semester Total: 15 Credit Hours

Fourth Year Total: 30 Credit Hours

Footnotes

¹ Many students opt to take the two-course calculus sequence (MATH 231 and MATH 232), but if you have the appropriate ALEKS score, you could take MATH 235 to fulfill your calculus requirement.

² Many students opt to take Elementary Statistics (MATH 220) to fulfill our statistics requirement, but we have two other course options: MATH 229 or MATH 318.

Program Total: 120 Credit Hours

Information Technology, B.S.

Program Description

The Bachelor of Science degree in Information Technology focuses on highly relevant skills in cybersecurity, computer networking, and end-user design and development. The information technology degree goes beyond the science behind computers, teaching students how to design, develop, test and maintain solutions in a wide range of computing and networking application areas. Information technology studies are integrated to provide students with the knowledge and skills to meet the computer technology needs of business, government, healthcare, education and other organizations. In addition to core competencies in programming and networking, security and privacy, and other application-focused computing fields, the information technology major features a junior-level project to address a community need. Also, students in the information technology major are required to complete a two-semester senior capstone project, allowing them to apply the range of their abilities in a real-world context. Students in the information technology major are also required to select nine credit hours of IT senior class electives from various fields such as cyber-security, web/mobile development and computer networking.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement (in addition to General Education)	3
Scientific Literacy requirement (in addition to General Education) ²	3
Major Requirements	52
Major Electives	9
University Electives	12
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credit hours may be fulfilled by courses required in the major.

² The scientific literacy requirement may be met by courses required in the major.

Major Requirements

Core Courses: 48 Credit Hours

CS 149. Introduction to Programming **Credits: 3.00**
CS 159. Advanced Programming **Credits: 3.00**
CS 227. Discrete Structures I **Credits: 3.00**
IT 101. Introduction to Information Technology **Credits: 3.00**
IT 203. Information Security and Privacy **Credits: 3.00**
IT 212. Digital Electronics **Credits: 3.00**
IT 215. Introduction to Telecommunications, Networking and Security **Credits: 3.00**
IT 240. Database Administration **Credits: 3.00**
IT 301. Web Technologies **Credits: 3.00**
IT 302. Societal and Ethical Issues in Information Technology **Credits: 3.00**
IT 311. Operating Systems Administration **Credits: 3.00**
IT 313. Community Projects **Credits: 3.00**
IT 333. Advanced Networking for Information Technology **Credits: 3.00**
IT 340. Data Science and Machine Learning **Credits: 3.00**
IT 347. Interactive Computing Systems **Credits: 3.00**
MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

Capstone: 4 Credit Hours

IT 444. Capstone Project Design **Credits: 1.00**
IT 445. Capstone Project Implementation **Credits: 3.00**

Major Requirements Total: 52 Credit Hours

Major Electives: 9 Credit Hours

Select from the following list of courses.

ISAT 445. Software Engineering and Agile Development **Credits: 3.00**
IT 460. Advanced Cybersecurity **Credits: 3.00**
IT 461. Internetworking **Credits: 3.00**
IT 462. Network Applications Development **Credits: 3.00**
IT 465. Wireless Networking and Security **Credits: 3.00**
IT 334. Computer Cyber Crime, Forensics and Auditing **Credits: 3.00**
IT 341. Mobile Applications **Credits: 3.00**
IT 342. Web Server Administration **Credits: 3.00**
IT 435. Cryptography for Information Technology **Credits: 3.00**
IT 443. Cloud Computing and IoT Networks **Credits: 3.00**

Recommended Schedule for Majors

First Year

Fall Semester: 15 Credit Hours

IT 101. Introduction to Information Technology **Credits: 3.00**
CS 149. Introduction to Programming **Credits: 3.00**
General Education, degree requirements or elective courses *Credits: 9.00*

Spring Semester: 15 Credit Hours

CS 159. Advanced Programming **Credits: 3.00**
CS 227. Discrete Structures I **Credits: 3.00**
General Education, degree requirements or elective courses *Credits: 9.00*

Total: 30 Credit Hours

Second Year

Fall Semester: 15 Credit Hours

IT 215. Introduction to Telecommunications, Networking and Security **Credits: 3.00**
IT 203. Information Security and Privacy **Credits: 3.00**
MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**
General Education, degree requirements or elective courses *Credits: 6.00*

Spring Semester: 15 Credit Hours

IT 212. Digital Electronics **Credits: 3.00**
IT 240. Database Administration **Credits: 3.00**
General Education, degree requirements or elective courses *Credits: 9.00*

Total: 30 Credit Hours

Third Year

Fall Semester: 15 Credit Hours

IT 301. Web Technologies **Credits: 3.00**
IT 302. Societal and Ethical Issues in Information Technology **Credits: 3.00**
IT 333. Advanced Networking for Information Technology **Credits: 3.00**
General Education, degree requirements or elective courses *Credits: 6.00*

Spring Semester: 15 Credit Hours

IT 311. Operating Systems Administration **Credits: 3.00**
IT 313. Community Projects **Credits: 3.00**
IT 340. Data Science and Machine Learning **Credits: 3.00**
IT 347. Interactive Computing Systems **Credits: 3.00**
General Education, degree requirements or elective courses *Credits: 3.00*

Total: 30 Credit Hours

Fourth Year

Fall Semester: 15 Credit Hours

IT 444. Capstone Project Design **Credits: 1.00**

General Education, degree requirements or elective courses *Credits: 14.00*

Spring Semester: 15 Credit Hours

IT 445. Capstone Project Implementation **Credits: 3.00**

General Education, degree requirements or elective courses *Credits: 12.00*

Total: 30 Credit Hours

Program Total: 120 Credit Hours

Computer Science Minor

Minor Adviser: Michael Kirkpatrick

The Computer Science minor begins with a required two-course introductory sequence (CS 149 and CS 159) that is open to any student who meets the course prerequisites. CS 101 and CS/MATH 227 are optional courses that are also open to any student who meets the course prerequisites. Students wishing to continue in the CS minor beyond CS 159 must apply for full admission. The application procedure and requirements are available on the CS department site (<https://www.jmu.edu/cs>).

Admission Requirements

Any student may declare a CS major or minor, but students may enroll in CS courses beyond CS 149, CS 159 and CS 227/CS 227 only if they are fully admitted to the CS major or minor. Full admission to the major or minor is granted as described below.

Students who have attempted CS 149, CS 159 or CS 227/MATH 227 at JMU may not attempt them elsewhere (that is, they must make any second attempts at JMU).

Students must submit an application for full admission to the CS major or minor no earlier than the semester in which they complete CS 159.

Students with a GPA of 3.0 or better in CS 149 and CS 159, and who have attempted CS 159 only once, are guaranteed full admission to the major or minor. Others will be granted full admission to the CS major or minor as space permits based on their GPA in CS 149 and CS 159 and faculty evaluation of their potential to succeed in the CS major or minor.

Students who have completed the CS minor may apply for full admission to the CS major no earlier than the semester in which they complete the last course in the CS minor.

CS minors with a GPA of 3.0 or higher in the CS minor will be fully admitted to the CS major; others will be admitted as space permits based on their minor GPA.

Students will be notified of their CS major or minor admission status no later than January 1st for admission in the spring semester (following application the previous fall semester), and no later than May 31st for admission in the fall semester (following application the previous spring semester).

Students who are not granted full admission to the CS major or minor may file one additional application in the next regular semester after they are denied admission.

Transfer students who have completed the equivalent of CS 159 (or for whom this class is waived) are granted full admission to the CS major or minor. Other transfer students are subject to same process as non-transfer students.

Minor Requirements

Courses

CS 149. Introduction to Programming **Credits: 3.00**

CS 159. Advanced Programming **Credits: 3.00**

Core course (choose one): 3 Credit Hours

CS 240. Algorithms and Data Structures **Credits: 3.00**

CS 261. Computer Systems I **Credits: 3.00**

CS 345. Software Engineering **Credits: 3.00**

Electives: 9 Credit Hours

Choose three computer science courses numbered CS 101 or above, excluding CS 280.

Additional core courses completed (CS 240, CS 261 and CS 345) beyond the one required can be counted for this requirement.

Total: 18 Credit Hours

Department of Early, Elementary and Reading Education

Joi Merritt, **Academic Unit Head**

John Almarode, **Assistant Academic Unit Head**

Phone: (540) 568-3066

Location: Memorial Hall, Room 3100

Website: <http://www.jmu.edu/coe/eere>

Professors

J. Almarode, S. Kang, S. Mathur

Associate Professors

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Assistant Professors

D. Hadley, C. Hass, A. Quinn

Instructors

A. Berry, J. Dameron, E. Imbrescia, B. Yoder

Advisers

A. Fornadel, A. Loyacano

The Department of Early, Elementary and Reading Education offers graduate and undergraduate programs in literacy, early and elementary education. All programs include extensive fieldwork to ensure varied opportunities for experiences working with children and families.

Education: Elementary Education, B.S.

Program Description

The Elementary Education Program prepares candidates to teach students in grades PreK-6. Drawn from research and theories in child development, teaching and learning, the course work and field experiences prepare teacher candidates to employ a cross-disciplinary approach to instruction that reflects an understanding of the diverse nature of learners and their families.

The JMU Elementary Education Program seeks to foster in its candidates an empathic understanding of the ways that children are affected by social contexts and by the children's own strengths and needs; the knowledge and pedagogical skills to support each child's right to success; and belief in the value of each child. Our candidates are guided in:

Critically challenging conventional wisdom and common practices to identify hidden assumptions and activities that constrain or privilege some at the expense of others.

Learning to ask questions and developing an inquiring approach motivated by the desire to understand the world in its myriad complexities.

Reflecting deeply on and constructing positive relationships with others.

Expressing knowledge, skills and attitudes in ways that communicate with others and provide a forum for the creative and academic expression of the profession and the self.

Developing an appreciation for the global connection of all humanity and our interdependence on the finite natural resources of the earth.

Experiencing life among people whose social contexts are unlike the candidates' own to broaden and deepen respect for and sensitivity to various cultures and social contexts.

Knowing and appreciating the process of human unfolding throughout the cycles of life from conception onward, particularly throughout the period of childhood and preadolescence.

Valuing the literacies and literate backgrounds of all learners to develop equitable, inclusive instruction that honors diverse learners at all developmental phases.

Reflecting critically on the ways we embody and enact a sustainable sense of self.

Building on interdisciplinary connections among content areas to create inclusive, responsive and effective instruction for all learners.

The courses in the elementary education program are organized to integrate academic content with pedagogical practice throughout the major. Field experiences are provided along with course work to enable candidates to apply

their knowledge in a variety of settings. Candidates must be fully accepted into teacher education to begin the ELED course work in the third year.

Assessment occurs during each semester, and candidate performance is reviewed at the end of each semester. Candidates must demonstrate satisfactory performance before moving on to the next semester. Satisfactory performance includes a minimum grade of "C" in all education course work and an overall 2.5 GPA, demonstration of professional behaviors, and acceptable performance in practica and on key assessments.

Candidates should note that they must be fully admitted to teacher education prior to registering for the courses offered during Year 3 of the elementary education program. Candidates should also note that, on occasion, Virginia Department of Education or other accrediting agencies may change requirements after the catalog copy is approved. Therefore, it is especially important for candidates to confer with their education advisers on a regular basis for the most current requirements. Completion of the Elementary Education major leads to a Virginia teaching license with an endorsement in PK-6 Elementary Education. To be recommended for licensure, all candidates must meet the following requirements:

- Complete General Education requirements.
- Complete the Elementary Education pre-professional program.
- Complete the disciplinary courses required for the elementary education degree.
- Meet all admission and retention criteria for teacher education including satisfactory scores on the VCLA, Praxis Core Math, RVE and Praxis Elementary Multiple Subjects tests.
- Meet admission requirements for the Elementary Education program.
- Meet performance and behavior standards as indicated by ratings on the program Professional Dispositions Checklist.

Admission Requirements

Students must meet specific requirements to be admitted to programs within the College of Education. These criteria can be found on the College of Education catalog page.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education (includes Pre-Professional requirements) ¹	41
Scientific Literacy (in addition to General Education) ²	3-4
Quantitative Reasoning (in addition to General Education) ³	3
Major Requirements	65
University Electives ⁴ (up to)	7-8
Total	120

Footnote

¹ Up to 23 credit hours of pre-professional requirements may also count toward general education requirements.

² May be fulfilled through the pre-professional requirements.

³ MATH 210 fulfills this requirement.

⁴ Up to 8 credit hours of electives may be required to achieve the minimum 120 credit hours for graduation.

Pre-professional Requirements: 30 Credit Hours

These courses may fulfill General Education requirements and/or university electives for this program.

Students majoring in Elementary Education will be required to complete JMU General Education with additional courses related to Bachelor of Science requirements (Quantitative and Scientific Literacy). Given required VDOE competencies associated with PK-6 teacher licensure, students will be required to enroll in the courses below.

All students are required to take both MATH 110 and MATH 210 to meet VDOE competencies.

MATH 110. Mathematics for Elementary and Middle School Teachers I [C3QR] **Credits: 4.00 and**

MATH 210. Mathematics for Elementary and Middle School Teachers II **Credits: 4.00 Cluster Two [C2HQC]**

HIST 101. World History to 1500 [C2HQC] **Credits: 3.00**

or

HIST 102. World History Since 1500 [C2HQC] **Credits: 3.00**

Cluster Three [C3T1G1]

ISCI 171. Earth and Planetary Science for Teachers [C3NS] **Credits: 3.00**

ISCI 172. Physical Science for Teachers [C3PP] **Credits: 3.00**

ISCI 173. Life and Environmental Science for Teachers [C3L] **Credits: 3.00**

Cluster Four [C4AE]

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**

or

GEOG 200. Geography: The Global Dimension [C4GE] **Credits: 3.00**

HIST 225. U.S. History [C4AE] **Credits: 4.00**

or

POSC 225. U.S. Government [C4AE] **Credits: 4.00**

Cluster Five [C5SD]

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

Major Requirements

Elementary Education Core Requirements: 15 Credit Hours

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

ELED 208. Child Development: Birth Through Adolescence **Credits: 3.00**

ELED 272. Introduction to Early and Elementary Education **Credits: 3.00**

ELED 310. Diversity in Elementary Education **Credits: 3.00**

EXED 200. Foundations of Exceptional Education **Credits: 3.00**

Elementary Education Disciplinary Requirements: 50 Credit Hours

ELED 321. Practicum with a Focus on Learners and Learning **Credits: 1.00-3.00**
(*ELED 321 must be taken for 1.00 credit hour*)

ELED 322. Practicum with a Focus on Curriculum Integration and Guiding Behavior
Credits: 1.00-3.00 (*ELED 322 must be taken for 1.00 credit hour*)

ELED 332. Children and Science **Credits: 3.00**

ELED 333. Children and Mathematics I **Credits: 3.00**

ELED 334. Children and Social Studies **Credits: 3.00**

ELED 343. Children and Mathematics II **Credits: 3.00**

ELED 400. Elementary Education Final Practicum **Credits: 1.00** (*taken twice for a total of 2.00 credit hours*)

LED 300. Reading Instruction and Assessment for Diverse Learners PK-6 **Credits: 3.00**

LED 350. Writing Instruction, Assessment and Technology for Diverse Learners PK-6
Credits: 3.00

ELED 450. Planning Instruction and Assessment **Credits: 3.00**

ELED 455. Home, School, Communities **Credits: 3.00**

ELED 480. Student Teaching in Elementary Education **Credits: 8.00** (*taken twice for a total of 16.00 credit hours*)

ELED 485. Guiding Student Behavior: Responsive Classroom Management **Credits: 3.00**

LED 462. Disciplinary Literacy for Diverse Classrooms PK-6 **Credits: 3.00**

Major Requirements Total: 65 Credit Hours

University Electives: 8 Credit Hours

Recommended Schedule for Majors

Refer to the Program Sequencing Guide & Academic Plan, found at www.jmu.edu/coe/eere/_files/eled-major-sequence. In addition to this guide and planning tool, coordinating your schedule with your academic adviser is strongly recommended.

First Year - Fall Semester

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

EXED 200. Foundations of Exceptional Education **Credits: 3.00**

General Education courses **Credits: 9.00**

Total: 15 Credit Hours

First Year - Spring Semester

General Education courses **Credits: 15.00**

Total: 15 Credit Hours

Second Year - Fall Semester

ELED 208. Child Development: Birth Through Adolescence **Credits: 3.00**

ELED 272. Introduction to Early and Elementary Education **Credits: 3.00**
ELED 310. Diversity in Elementary Education **Credits: 3.00**
General Education, degree requirements, or university elective
courses **Credits: 6.00-7.00**

Total: 15-16 Credit Hours

Second Year - Spring Semester

General Education, degree requirements, or university elective
courses **Credits: 15.00**

Total: 15 Credit Hours

Third Year - Fall Semester

ELED 321. Practicum with a Focus on Learners and Learning **Credits: 1.00-3.00**
ELED 332. Children and Science **Credits: 3.00**
ELED 333. Children and Mathematics I **Credits: 3.00**
LED 350. Writing Instruction, Assessment and Technology for Diverse Learners PK-6
Credits: 3.00
General Education, degree requirements, or university elective courses **Credits:**
3.00-4.00

Total: 13-14 Credit Hours

Third Year - Spring Semester

ELED 322. Practicum with a Focus on Curriculum Integration and Guiding Behavior
Credits: 1.00-3.00
ELED 334. Children and Social Studies **Credits: 3.00**
ELED 343. Children and Mathematics II **Credits: 3.00**
LED 300. Reading Instruction and Assessment for Diverse Learners PK-6 **Credits: 3.00**
General Education, degree requirements, or university elective courses **Credits:**
6.00

Total: 16 Credit Hours

Fourth Year - Fall Semester

ELED 400. Elementary Education Final Practicum **Credits: 1.00**
ELED 450. Planning Instruction and Assessment **Credits: 3.00**
ELED 480. Student Teaching in Elementary Education **Credits: 8.00**
ELED 485. Guiding Student Behavior: Responsive Classroom Management **Credits:**
3.00

Total: 15 Credit Hours

Fourth Year - Spring Semester

ELED 400. Elementary Education Final Practicum **Credits: 1.00**
ELED 455. Home, School, Communities **Credits: 3.00**
ELED 480. Student Teaching in Elementary Education **Credits: 8.00**
LED 462. Disciplinary Literacy for Diverse Classrooms PK-6 **Credits: 3.00**

Total: 15 Credit Hours

Program Total: 120 Credit Hours

Department of Economics

Charlene M. Kalenkoski, **Department Head**

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Location: Zane Showker Hall, Room 6012

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Professors

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Associate Professors

A. Smith, J. Subrick

Assistant Professors

S. Basu, T. Ding, B. Hamilton, D. Harper, S. Hussain, P. Mutreja

Lecturers

Z. Gochenour, P. Heap, J. Kruggel, M. Sameni

Mission

The Department of Economics is committed to students' intellectual development by fostering an understanding and appreciation of economic forms of explanation and their relationships to other social sciences. Economics faculty members are dedicated to sound and effective pedagogy, to scholarship of the highest quality and to outreach to the local and business community.

The department provides an intellectual foundation for the appreciation and understanding of economic theory and policy. This foundation is developed within a broader educational perspective that stresses the importance of imaginative thinking, free inquiry and the pursuit of life-long learning. In this way, the program prepares students with the economic literacy necessary to cope with the challenges inherent in a world of accelerating change.

Goals

Help students develop analytical and critical thinking skills.
Promote cross disciplinary forms of instruction.
Seek continuous improvement in the quality of classroom instruction.
Serve the community through outreach services.
Help students pursue careers and additional education.

Marketable Skills

Analytical thinking capabilities highly valued by business, government and the nonprofit sector.
Writing and research skills applicable to a wide variety of careers.
Statistical and econometric skills used in business and finance.

Preparation in critical thinking valued by graduate schools, including law, business, and arts and sciences.

Analytical skills valued by employers for internships in business, government and consulting.

Co-curricular Activities and Organizations

Economics Club (open membership)

Omicron Delta Epsilon (national honor society in economics)

Credit by Examination

Credit in ECON 200 will be granted to students who achieve a grade of 4 or 5 on the Advanced Placement Test in Macroeconomics administered by the Educational Testing Service. Credit in ECON 201 will be granted to students who achieve a grade of 4 or 5 on the Advanced Placement Test in Microeconomics.

Economics, B.A.

Program Description

Economics majors choose from a B.A., B.S. or B.B.A. degree. The B.A. and B.S. degrees are traditional liberal arts degrees that lead to a variety of career and graduate school options; the B.B.A. is designed to prepare students for careers in business.

The minimum requirement for a B.A. degree in economics is 36 credit hours of economics, including 21 credit hours of core courses and 15 credit hours of electives. It is also necessary for the student to complete the foreign language and philosophy requirements for a B.A. degree as well as complete the General Education: The Human Community program.

Admission and Retention Requirements

College of Business Progression Standards

Any student admitted to JMU can declare any major offered by the College of Business. However, students must make satisfactory progress in order to be formally admitted into the College of Business. Requirements to continue pursuing a B.B.A. degree, often referred to as progression standards or formal admission, can be found on the College of Business catalog page.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course(s) (in addition to General Education courses)	3
Major requirements (listed below) and electives	62-76
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232), or by placing out of that language through the Department of Foreign Language, Literatures and Cultures' placement test.

Major Requirements

ECON 200. Introduction to Macroeconomics [C4GE] Credits: 3.00 ¹

ECON 201. Introduction to Microeconomics Credits: 3.00 ¹

ECON 284. Introduction to Quantitative Analysis in Economics Credits: 3.00 ^{1, 2}

ECON 331. Intermediate Microeconomic Theory Credits: 3.00 ³

ECON 332. Intermediate Macroeconomic Theory Credits: 3.00 ³

ECON 385. Econometrics Credits: 3.00 ^{3, 4}

ECON 488. Senior Capstone Seminar in Economics Credits: 3.00

Economics electives (at least six credits must be at the 400 level, not including ECON 488, ECON 490 or ECON 499A) Credits: 15.00

Footnotes

¹ Students need a minimum grade of "C" in ECON 200, ECON 201 and ECON 284 as a prerequisite for advanced economics courses.

² Students may substitute COB 291 for ECON 284.

³ Students need to complete ECON 331, ECON 332 and ECON 385 with a minimum grade of "C" to graduate with an Economics degree.

⁴ Students must complete ECON 385 with a minimum grade of "B-" in order to choose ECON 483 or ECON 485 as an elective option.

Major Requirements Total: 36 Credit Hours

Additional Required Courses

Students must select **one** of the following calculus courses: (3-4 Credit Hours)

MATH 205. Introductory Calculus I [C3QR]

MATH 231. Calculus with Functions I [C3QR]

MATH 233. Calculus with Modeling I [C3QR]

MATH 235. Calculus I [C3QR]

ISAT 151. Topics in Applied Calculus in ISAT [C3QR]

Students must select **one** of the following statistics courses: (3-4 Credit Hours)

MATH 220
or
COB 191

Economics Concentrations

The B.B.A. degree in economics includes 18 credit hours of core courses. The B.A. and B.S degrees in economics include 21 credit hours of core courses.

Concentration in Environmental and Natural Resource Economics

Students who elect a major in Economics with a concentration in Environmental and Natural Resource Economics are required to meet degree requirements and complete the following Economics courses (which can also be used to satisfy degree requirements) *as well as* the classes specified *in either* Option A or Option B.

Economics Required Core Courses: 18-21 Credit Hours

Environmental and Natural Resource Economics Concentration Courses: 7 Credit Hours

ECON 305. Environmental Economics **Credits: 3.00**
ECON 340. Economics of Natural Resources **Credits: 3.00**
ECON 490. Special Studies in Economics **Credits: 1.00 - 3.00** (*ECON 490 is taken for 1.00 credit hour*)

Electives: 9 Credit Hours

One 200- or 300-level economics elective *3.00 Credit Hours*
Two 400-level economics elective *6.00 Credit Hours*

Total: 34-37 Credit Hours

Option A or Option B

In addition, students must choose Option A or Option B.

Option A: 12 Credit Hours

For students with an interest in environmental sustainability as it applies to forests, fisheries and wildlife.

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
BIO 250. Quantitative Ecology and Evolution **Credits: 3.00 and**
BIO 250L. Quantitative Ecology and Evolution Laboratory **Credits: 1.00**

Choose one of the following: 4 Credit Hours

Serves as the prerequisite to BIO 250/BIO 250L.

BIO 150. Foundations of Biology II **Credits: 3.00 and**
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**
GEOG 210. Physical Geography (2, 2) **Credits: 4.00**
GEOL 110. Physical Geology [C3NS] **Credits: 3.00 and**
GEOL 110L. Physical Geology Laboratory [C3L] **Credits: 1.00**
ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**

Total: 46-49 Credit Hours

Option B: 9-11 Credit Hours

For students interested in global climate change and environmental sustainability (including traditional approaches to pollution prevention and control).

Choose one of the following: 3-4 Credit Hours

GEOG 210. Physical Geography (2, 2) **Credits: 4.00**
GEOL 115. Earth Systems and Climate Change [C3NS] **Credits: 3.00**
ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**

Choose two of the following: 6-7 Credit Hours

GEOG 325. Environmental Ethics **Credits: 3.00**
GEOG 327. Climatology **Credits: 3.00**
GEOG 329. Global Climate Change **Credits: 3.00**
GEOG 427. Water Resources of the World **Credits: 3.00**
GEOG 429. Sustainability: An Ecological Perspective **Credits: 3.00**
or
ISAT 429. Sustainability: An Ecological Perspective **Credits: 3.00**
HIST 427. U.S. Environmental History **Credits: 3.00**
ISAT 320. Fundamentals of Environmental Science and Technology I **Credits: 4.00**
ISAT 321. Fundamentals of Environmental Science and Technology II **Credits: 3.00**
ISAT 422. Industrial Environmental Management **Credits: 3.00**
ISAT 427. Industrial Hygiene **Credits: 3.00**
ISAT 428. Industrial Ecology **Credits: 3.00**
SOCI 311. Sociology of the Environment **Credits: 3.00**

Total: 43-48 Credit Hours

Concentration in Financial Economics Required Courses

Students who elect a major in Economics with a concentration in Financial Economics are required to meet Economics degree requirements and complete the following courses (which can also be used to satisfy degree requirements).

Economics Required Core Courses: 18-21 Credit Hours

Financial Economics Concentration Courses: 18 Credit Hours

ECON 372. International Finance and Payments **Credits: 3.00**
or
FIN 372. International Finance and Payments **Credits: 3.00**
ECON 430. Monetary Theory **Credits: 3.00**
or
ECON 483. Applied Time Series Analysis **Credits: 3.00**

It is also required that the following 12 credits of Finance courses be used to satisfy 6 credits of the 300-level Economics elective credits required for the degree. (Note that

this makes it possible to receive a degree in Economics with a concentration in Financial Economics with no more than 30 credits in Economics.)

FIN 301. Principles of Finance **Credits: 3.00**

FIN 360. Analytical Methods in Finance **Credits: 3.00**

FIN 371. Principles of Investments **Credits: 3.00**

FIN 380. Elemental and Derivative Securities Analysis **Credits: 3.00**

Elective: 3 Credit Hours

Economics elective (400 level, not including ECON 490, ECON 499A) *3.00 Credit Hours*

Total: 36-39 Credit Hours

Concentration in International and Development Economics

Students who elect a major in Economics with a concentration in International Economics are required to meet degree requirements and complete the courses listed below (which can also be used to satisfy degree requirements). In addition, students completing this course of study must have a genuine international experience (such as an internship or semester abroad) and must complete a foreign language through the civilization course, including all of the prerequisites for that course.

Economics Required Core Courses: 18-21 Credit Hours

International and Development Economics Concentration Courses: 12 Credit Hours

ECON 312. Comparative Economic Systems **Credits: 3.00**

ECON 365. Economic Development **Credits: 3.00**

ECON 370. International Trade and Trade Policies **Credits: 3.00**

ECON 372. International Finance and Payments **Credits: 3.00**

or

FIN 372. International Finance and Payments **Credits: 3.00**

Two 400-level economics electives: 6 Credit Hours

Total: 36-39 Credit Hours

Additional Information

In addition, students completing this course of study must have a genuine international experience (such as an internship or semester abroad) and must complete a foreign language through the civilization course, including all of the prerequisites for that course.

Concentration in Political Economy

Students who elect a major in Economics with a concentration in political economy are required to meet degree requirements and complete four of the following courses (which can also be used to satisfy degree requirements).

Economics Required Core Courses: 18-21 Credit Hours

Political Economics Concentration Courses

Choose four of the following: 12 Credit Hours

ECON 312. Comparative Economic Systems **Credits: 3.00**

ECON 326. Public Finance **Credits: 3.00**

ECON 327. Game Theory **Credits: 3.00**

ECON 405. Political Economy **Credits: 3.00**

ECON 426. Theory of Public Choice **Credits: 3.00**

ECON 455. Economics of Regulated Industries **Credits: 3.00**

Two 400-level economics electives: 0-6 Credit Hours

ECON 405, ECON 426 and/or ECON 455 also fulfill this 400-level elective requirement if taken to satisfy the 12 credit hour concentration requirement.

Total: 30-39 Credit Hours

Concentration in Quantitative Economics

Students who elect a major in Economics with a concentration in Quantitative Economics are required to meet degree requirements and complete two of the following courses (which can also be used to satisfy degree requirements).

Economics Required Core Courses: 18-21 Credit Hours

Choose three of the following four options: 9 Credit Hours

ECON 384. Mathematical Economics **Credits: 3.00**

ECON 431. Advanced Microeconomic Theory **Credits: 3.00**

or

ECON 432. Advanced Macroeconomics **Credits: 3.00**

(Credit may be received for either ECON 431 or ECON 432, but not both)

ECON 483. Applied Time Series Analysis **Credits: 3.00**

ECON 485. Advanced Econometrics **Credits: 3.00**

One 300- or 400-level economics elective: 3 Credit Hours

Total: 30-33 Credit Hours

Concentration in Socioeconomics

Students who elect a major in Economics with a concentration in Socioeconomics are required to meet Economics degree requirements and complete the following courses (which can also be used to satisfy degree requirements).

Economics Required Core Courses: 18-21 Credit Hours

Economics Electives

Choose four of the following: 12 Credit Hours

- ECON 306. The Economics of Women and the Family Credits: 3.00
- ECON 329. Health Economics Credits: 3.00
- ECON 340. Economics of Natural Resources Credits: 3.00
- ECON 360. Labor Economics Credits: 3.00
- ECON 365. Economic Development Credits: 3.00
- ECON 382. Urban Economics Credits: 3.00

Two 400-level economics electives: 6 Credit Hours

Total: 36-39 Credit Hours

Recommended Schedule for B.A. in Economics Majors

First Two Years

During the first two years, students should complete:

- Most of the General Education program
- ECON 200. Introduction to Macroeconomics [C4GE] Credits: 3.00
- ECON 201. Introduction to Microeconomics Credits: 3.00
- ECON 284. Introduction to Quantitative Analysis in Economics Credits: 3.00
- COB 191. Business Analytics I Credits: 3.00

Choose one of the following:

- ISAT 151. Topics in Applied Calculus in ISAT [C3QR] Credits: 4.00
- MATH 205. Introductory Calculus I [C3QR] Credits: 3.00
- MATH 231. Calculus with Functions I [C3QR] Credits: 3.00
- MATH 233. Calculus with Modeling I [C3QR] Credits: 3.00
- MATH 235. Calculus I [C3QR] Credits: 4.00

Additional Information

Students are encouraged to take ECON 331 and/or ECON 332 in their sophomore year (provided that the course prerequisites have been met).

Third and Fourth Years

B.A. economics majors should complete ECON 331, ECON 332 , and preferably ECON 385 by the end of their junior year. While most majors will complete the 400-level requirements in economics during their senior year, students may take a 400-level course during their junior year if the prerequisite for the course has been met. ECON 488 should be taken during the senior year.

Program Total: 120 Credit Hours

Economics, B.B.A.

Program Description

Economics majors choose from a B.A., B.S. or B.B.A. degree. The B.A. and B.S. degrees are traditional liberal arts degrees that lead to a variety of career and graduate school options; the B.B.A. is designed to prepare students for careers in business.

The B.B.A. degree in economics requires a minimum of 120 credit hours of undergraduate work.

The minimum requirement for a B.B.A. degree in economics is 33 credit hours of economics including 18 credit hours of core courses and 15 credit hours of electives. B.B.A. students also complete the core business requirements as well as complete the General Education program.

Admission and Retention Requirements

College of Business Progression Standards
Any student admitted to JMU can declare any major offered by the College of Business. However, students must make satisfactory progress in order to be formally admitted into the College of Business. Requirements to continue pursuing a B.B.A. degree, often referred to as progression standards or formal admission, can be found on the College of Business catalog page.

Degree and Major Requirements

Degree Requirements	Credit Hours
B.B.A. core courses ¹	45-46
Economics major requirements (minus overlapping B.B.A. requirements)	27
General Education courses ²	41
Electives	6-7
Total	120

Footnotes

¹ Up to seven credit hours of core requirements in economics and calculus may also be taken for General Education credit. Students who take the General Education packages and courses recommended by the College of Business will have only 39 credit hours of additional B.B.A. core requirements.
² The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

Major Requirements

Required Economics, B.B.A. Courses

ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**¹
ECON 201. Introduction to Microeconomics **Credits: 3.00**¹
ECON 331. Intermediate Microeconomic Theory **Credits: 3.00**²
ECON 332. Intermediate Macroeconomic Theory **Credits: 3.00**²
ECON 385. Econometrics **Credits: 3.00**^{2, 3}
ECON 488. Senior Capstone Seminar in Economics **Credits: 3.00**
Economics electives (at least six credits must be at the 400 level, not including ECON 488, ECON 490 or ECON 499A)⁴ **Credits: 15.00**

Footnotes

¹Students need a minimum grade of "C" in ECON 200 and ECON 201 as a prerequisite for advanced economics courses.

²Students need to complete ECON 331, ECON 332 and ECON 385 with a minimum grade of "C" to graduate with an Economics degree.

³Students must complete ECON 385 with a minimum grade of "B-" in order to choose ECON 483 or ECON 485 as an elective option.

⁴Students declaring an economics concentration will fulfill these electives with concentration requirements.

Major Requirements Total: 33 Credit Hours

B.B.A. Core Component

B.B.A. Lower-Level Core Component

B.B.A. majors must complete all of the B.B.A. core components as part of their degree program. The following courses comprise the B.B.A. Lower-Level Core Component:

COB 191. Business Analytics I **Credits: 3.00**¹
COB 202. Interpersonal Skills **Credits: 3.00**
COB 204. Computer Information Systems **Credits: 3.00**
COB 241. Financial Accounting **Credits: 3.00**
COB 242. Managerial Accounting **Credits: 3.00**^{4,5}
COB 291. Business Analytics II **Credits: 3.00**²
ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**
ECON 201. Introduction to Microeconomics **Credits: 3.00**

MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**³
or
MATH 235. Calculus I [C3QR] **Credits: 4.00**³

B.B.A. Upper-Level Core Component

The following courses comprise the B.B.A. Upper-Level Core Component:

COB 300A. Integrative Business: Management **Credits: 3.00**^{5,6}

COB 300B. Integrative Business: Finance **Credits: 3.00**^{5,6}
COB 300C. Integrative Business: Operations **Credits: 3.00**^{5,6}
COB 300D. Integrative Business: Marketing **Credits: 3.00**^{5,6}
COB 318. Legal and Ethical Environment of Business **Credits: 3.00**⁷
COB 487. Strategic Management **Credits: 3.00**⁸

Footnotes

¹ MATH 220 may be substituted for COB 191.

² COB 191 or equivalent and MATH 205 or equivalent are prerequisites for COB 291.

³ Calculus is required but not used in calculating the B.B.A. core GPA. Students may substitute MATH 231, MATH 233 or ISAT 151 to fulfill the calculus requirement. MATH 235 is preferred for Economics and Finance majors.

⁴ COB 241 must be taken before COB 242.

⁵ COB 242 is a prerequisite for COB 300 but is not used in calculating the B.B.A. core GPA.

⁶ All four COB 300 courses must be taken during the same semester.

⁷ COB 300 is a prerequisite or corequisite for COB 318. COB 318 is a prerequisite for COB 487 and BLAW 497.

⁸ COB 487 must be taken during the senior year.

Economics Concentrations

The B.B.A. degree in economics includes 18 credit hours of core courses. The B.A. and B.S degrees in economics include 21 credit hours of core courses.

Concentration in Environmental and Natural Resource Economics

Students who elect a major in Economics with a concentration in Environmental and Natural Resource Economics are required to meet degree requirements and complete the following Economics courses (which can also be used to satisfy degree requirements) *as well as* the classes specified *in either* Option A or Option B.

Economics Required Core Courses: 18-21 Credit Hours

Environmental and Natural Resource Economics Concentration Courses: 7 Credit Hours

ECON 305. Environmental Economics **Credits: 3.00**
ECON 340. Economics of Natural Resources **Credits: 3.00**
ECON 490. Special Studies in Economics **Credits: 1.00 – 3.00** (*ECON 490 is taken for 1.00 credit hour*)

Electives: 9 Credit Hours

One 200- or 300-level economics elective *3.00 Credit Hours*

Two 400-level economics elective *6.00 Credit Hours*

Total: 34-37 Credit Hours

Option A or Option B

In addition, students must choose Option A or Option B.

Option A: 12 Credit Hours

For students with an interest in environmental sustainability as it applies to forests, fisheries and wildlife.

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
BIO 250. Quantitative Ecology and Evolution **Credits: 3.00 and**
BIO 250L. Quantitative Ecology and Evolution Laboratory **Credits: 1.00**

Choose one of the following: 4 Credit Hours

Serves as the prerequisite to BIO 250/BIO 250L.

BIO 150. Foundations of Biology II **Credits: 3.00 and**
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**
GEOG 210. Physical Geography (2, 2) **Credits: 4.00**
GEOL 110. Physical Geology [C3NS] **Credits: 3.00 and**
GEOL 110L. Physical Geology Laboratory [C3L] **Credits: 1.00**
ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**

Total: 46–49 Credit Hours

Option B: 9–11 Credit Hours

For students interested in global climate change and environmental sustainability (including traditional approaches to pollution prevention and control).

Choose one of the following: 3–4 Credit Hours

GEOG 210. Physical Geography (2, 2) **Credits: 4.00**
GEOL 115. Earth Systems and Climate Change [C3NS] **Credits: 3.00**
ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**

Choose two of the following: 6–7 Credit Hours

GEOG 325. Environmental Ethics **Credits: 3.00**
GEOG 327. Climatology **Credits: 3.00**
GEOG 329. Global Climate Change **Credits: 3.00**
GEOG 427. Water Resources of the World **Credits: 3.00**
GEOG 429. Sustainability: An Ecological Perspective **Credits: 3.00**
or
ISAT 429. Sustainability: An Ecological Perspective **Credits: 3.00**
HIST 427. U.S. Environmental History **Credits: 3.00**
ISAT 320. Fundamentals of Environmental Science and Technology I **Credits: 4.00**
ISAT 321. Fundamentals of Environmental Science and Technology II **Credits: 3.00**
ISAT 422. Industrial Environmental Management **Credits: 3.00**
ISAT 427. Industrial Hygiene **Credits: 3.00**
ISAT 428. Industrial Ecology **Credits: 3.00**
SOCI 311. Sociology of the Environment **Credits: 3.00**

Total: 43–48 Credit Hours

Concentration in Financial Economics Required Courses

Students who elect a major in Economics with a concentration in Financial Economics are required to meet Economics degree requirements and complete the following courses (which can also be used to satisfy degree requirements).

Economics Required Core Courses: 18–21 Credit Hours

Financial Economics Concentration Courses: 18 Credit Hours

ECON 372. International Finance and Payments **Credits: 3.00**
or
FIN 372. International Finance and Payments **Credits: 3.00**
ECON 430. Monetary Theory **Credits: 3.00**
or

ECON 483. Applied Time Series Analysis **Credits: 3.00**

It is also required that the following 12 credits of Finance courses be used to satisfy 6 credits of the 300-level Economics elective credits required for the degree. (Note that this makes it possible to receive a degree in Economics with a concentration in Financial Economics with no more than 30 credits in Economics.)

FIN 301. Principles of Finance **Credits: 3.00**
FIN 360. Analytical Methods in Finance **Credits: 3.00**
FIN 371. Principles of Investments **Credits: 3.00**
FIN 380. Elemental and Derivative Securities Analysis **Credits: 3.00**

Elective: 3 Credit Hours

Economics elective (400 level, not including ECON 490, ECON 499A) **3.00 Credit Hours**

Total: 36–39 Credit Hours

Concentration in International and Development Economics

Students who elect a major in Economics with a concentration in International Economics are required to meet degree requirements and complete the courses listed below (which can also be used to satisfy degree requirements). In addition, students completing this course of study must have a genuine international experience (such as an internship or semester abroad) and must complete a foreign language through the civilization course, including all of the prerequisites for that course.

Economics Required Core Courses: 18–21 Credit Hours

International and Development Economics Concentration Courses: 12 Credit Hours

ECON 312. Comparative Economic Systems **Credits: 3.00**

ECON 365. Economic Development **Credits: 3.00**
ECON 370. International Trade and Trade Policies **Credits: 3.00**
ECON 372. International Finance and Payments **Credits: 3.00**
or
FIN 372. International Finance and Payments **Credits: 3.00**

Two 400-level economics electives: 6 Credit Hours

Total: 36-39 Credit Hours

Additional Information

In addition, students completing this course of study must have a genuine international experience (such as an internship or semester abroad) and must complete a foreign language through the civilization course, including all of the prerequisites for that course.

Concentration in Political Economy

Students who elect a major in Economics with a concentration in political economy are required to meet degree requirements and complete four of the following courses (which can also be used to satisfy degree requirements).

Economics Required Core Courses: 18-21 Credit Hours

Political Economics Concentration Courses

Choose four of the following: 12 Credit Hours

ECON 312. Comparative Economic Systems **Credits: 3.00**
ECON 326. Public Finance **Credits: 3.00**
ECON 327. Game Theory **Credits: 3.00**
ECON 405. Political Economy **Credits: 3.00**
ECON 426. Theory of Public Choice **Credits: 3.00**
ECON 455. Economics of Regulated Industries **Credits: 3.00**

Two 400-level economics electives: 0-6 Credit Hours

ECON 405, ECON 426 and/or ECON 455 also fulfill this 400-level elective requirement if taken to satisfy the 12 credit hour concentration requirement.

Total: 30-39 Credit Hours

Concentration in Quantitative Economics

Students who elect a major in Economics with a concentration in Quantitative Economics are required to meet degree requirements and complete two of the following courses (which can also be used to satisfy degree requirements).

Economics Required Core Courses: 18-21 Credit Hours

Choose three of the following four options: 9 Credit Hours

ECON 384. Mathematical Economics **Credits: 3.00**
ECON 431. Advanced Microeconomic Theory **Credits: 3.00**
or
ECON 432. Advanced Macroeconomics **Credits: 3.00**
(Credit may be received for either ECON 431 or ECON 432, but not both)
ECON 483. Applied Time Series Analysis **Credits: 3.00**
ECON 485. Advanced Econometrics **Credits: 3.00**

One 300- or 400-level economics elective: 3 Credit Hours

Total: 30-33 Credit Hours

Concentration in Socioeconomics

Students who elect a major in Economics with a concentration in Socioeconomics are required to meet Economics degree requirements and complete the following courses (which can also be used to satisfy degree requirements).

Economics Required Core Courses: 18-21 Credit Hours

Economics Electives

Choose four of the following: 12 Credit Hours

ECON 306. The Economics of Women and the Family **Credits: 3.00**
ECON 329. Health Economics **Credits: 3.00**
ECON 340. Economics of Natural Resources **Credits: 3.00**
ECON 360. Labor Economics **Credits: 3.00**
ECON 365. Economic Development **Credits: 3.00**
ECON 382. Urban Economics **Credits: 3.00**

Two 400-level economics electives: 6 Credit Hours

Total: 36-39 Credit Hours

Recommended Schedule for Majors

First Two Years

During the first two years, students should complete:

The 30-31 hour, lower-division B.B.A. core curriculum (failing to complete these courses before the first semester of the junior year could delay admission to the degree program and enrollment in COB 300A/COB 300B/COB 300C/COB 300D).

ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**
ECON 201. Introduction to Microeconomics **Credits: 3.00**
COB 191. Business Analytics I **Credits: 3.00**

Choose one of the following:

ISAT 151. Topics in Applied Calculus in ISAT [C3QR] **Credits: 4.00**
MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**
MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**
MATH 235. Calculus I [C3QR] **Credits: 4.00**

Third and Fourth Years

B.B.A. economics majors should take COB 300A, COB 300B, COB 300C, and COB 300D before the spring semester of their junior year and complete ECON 331, ECON 332, and preferably ECON 385 by the end of their junior year.

While most majors will complete the 400-level requirements in economics during their senior year, students may take a 400-level course during their junior year if the prerequisite for the course has been met. ECON 488 should be taken during the senior year.

Program Total: 120 Credit Hours

Economics, B.S.

Program Description

Economics majors choose from a B.A., B.S. or B.B.A. degree. The B.A. and B.S. degrees are traditional liberal arts degrees that lead to a variety of career and graduate school options; the B.B.A. is designed to prepare students for careers in business.

The minimum requirement for a B.S. degree in economics is 36 credit hours of economics including 21 credit hours of core courses and 15 credit hours of electives. It is also necessary for the student to complete the quantitative and scientific literacy requirements for a B.S. degree as well as complete the General Education program.

Admission and Retention Requirements

College of Business Progression Standards
Any student admitted to JMU can declare any major offered by the College of Business. However, students must make satisfactory progress in order to be formally admitted into the College of Business. Requirements to continue pursuing a B.B.A. degree, often referred to as progression standards or formal admission, can be found on the College of Business catalog page.

Degree and Major Requirements

Degree and Major Requirements	Credit Hours
General Education ¹	41
Quantitative requirement ²	3
Scientific Literacy requirement ²	3-4
Major requirements (listed below) and electives	72-73
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.
² In addition to course work taken to fulfill General Education requirements.

Major Requirements

Required Economics, B.S. Courses

ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00** ¹
ECON 201. Introduction to Microeconomics **Credits: 3.00** ¹
ECON 284. Introduction to Quantitative Analysis in Economics **Credits: 3.00** ^{1, 2}
ECON 331. Intermediate Microeconomic Theory **Credits: 3.00** ³
ECON 332. Intermediate Macroeconomic Theory **Credits: 3.00** ³
ECON 385. Econometrics **Credits: 3.00** ^{3, 4}
ECON 488. Senior Capstone Seminar in Economics **Credits: 3.00**
Economics electives (at least six credits must be at the 400 level, not including ECON 488, ECON 490 or ECON 499A). *Credits: 15.00*

Footnotes

¹ Students need a grade of "C" or better in ECON 200, ECON 201, and ECON 284 as a prerequisite for advanced economics courses.
² Students may substitute COB 291 for ECON 284.
³ Students need to complete ECON 331, ECON 332, and ECON 385 with a grade of "C" or better to graduate with an Economics degree.
⁴ Students must complete ECON 385 with a grade of "B-" or better in order to choose ECON 483 or ECON 485 as an elective option.

Major Requirements Total: 36 Credit Hours

Additional Required Courses

Students must select **one** of the following calculus courses: (3-4 Credit Hours)
MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**
MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**
MATH 233. Calculus with Modeling I [C3QR] **Credits: 3.00**
MATH 235. Calculus I [C3QR] **Credits: 4.00**
ISAT 151. Topics in Applied Calculus in ISAT [C3QR] **Credits: 4.00**

Students must select **one** of the following statistics courses: (3-4 Credit Hours)

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

or

COB 191. Business Analytics I **Credits: 3.00**

Economics Concentrations

The B.B.A. degree in economics includes 18 credit hours of core courses. The B.A. and B.S degrees in economics include 21 credit hours of core courses.

Concentration in Environmental and Natural Resource Economics

Students who elect a major in Economics with a concentration in Environmental and Natural Resource Economics are required to meet degree requirements and complete the following Economics courses (which can also be used to satisfy degree requirements) *as well as the classes specified in either Option A or Option B.*

Economics Required Core Courses: 18-21 Credit Hours

Environmental and Natural Resource Economics Concentration Courses: 7 Credit Hours

ECON 305. Environmental Economics **Credits: 3.00**

ECON 340. Economics of Natural Resources **Credits: 3.00**

ECON 490. Special Studies in Economics **Credits: 1.00 - 3.00** (*ECON 490 is taken for 1.00 credit hour*)

Electives: 9 Credit Hours

One 200- or 300-level economics elective *3.00 Credit Hours*

Two 400-level economics elective *6.00 Credit Hours*

Total: 34-37 Credit Hours

Option A or Option B

In addition, students must choose Option A or Option B.

Option A: 12 Credit Hours

For students with an interest in environmental sustainability as it applies to forests, fisheries and wildlife.

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

BIO 250. Quantitative Ecology and Evolution **Credits: 3.00 and**

BIO 250L. Quantitative Ecology and Evolution Laboratory **Credits: 1.00**

Choose one of the following: 4 Credit Hours

Serves as the prerequisite to BIO 250/BIO 250L.

BIO 150. Foundations of Biology II **Credits: 3.00 and**

BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

GEOG 210. Physical Geography (2, 2) **Credits: 4.00**

GEOL 110. Physical Geology [C3NS] **Credits: 3.00 and**

GEOL 110L. Physical Geology Laboratory [C3L] **Credits: 1.00**

ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**

Total: 46-49 Credit Hours

Option B: 9-11 Credit Hours

For students interested in global climate change and environmental sustainability (including traditional approaches to pollution prevention and control).

Choose one of the following: 3-4 Credit Hours

GEOG 210. Physical Geography (2, 2) **Credits: 4.00**

GEOL 115. Earth Systems and Climate Change [C3NS] **Credits: 3.00**

ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**

Choose two of the following: 6-7 Credit Hours

GEOG 325. Environmental Ethics **Credits: 3.00**

GEOG 327. Climatology **Credits: 3.00**

GEOG 329. Global Climate Change **Credits: 3.00**

GEOG 427. Water Resources of the World **Credits: 3.00**

GEOG 429. Sustainability: An Ecological Perspective **Credits: 3.00**

or

ISAT 429. Sustainability: An Ecological Perspective **Credits: 3.00**

HIST 427. U.S. Environmental History **Credits: 3.00**

ISAT 320. Fundamentals of Environmental Science and Technology I **Credits: 4.00**

ISAT 321. Fundamentals of Environmental Science and Technology II **Credits: 3.00**

ISAT 422. Industrial Environmental Management **Credits: 3.00**

ISAT 427. Industrial Hygiene **Credits: 3.00**

ISAT 428. Industrial Ecology **Credits: 3.00**

SOCI 311. Sociology of the Environment **Credits: 3.00**

Total: 43-48 Credit Hours

Concentration in Financial Economics Required Courses

Students who elect a major in Economics with a concentration in Financial Economics are required to meet Economics degree requirements and complete the following courses (which can also be used to satisfy degree requirements).

Economics Required Core Courses: 18-21 Credit Hours

Financial Economics Concentration Courses: 18 Credit Hours

ECON 372. International Finance and Payments **Credits: 3.00**

or

FIN 372. International Finance and Payments **Credits: 3.00**

ECON 430. Monetary Theory **Credits: 3.00**

or

ECON 483. Applied Time Series Analysis **Credits: 3.00**

It is also required that the following 12 credits of Finance courses be used to satisfy 6 credits of the 300-level Economics elective credits required for the degree. (Note that this makes it possible to receive a degree in Economics with a concentration in Financial Economics with no more than 30 credits in Economics.)

FIN 301. Principles of Finance **Credits: 3.00**

FIN 360. Analytical Methods in Finance **Credits: 3.00**

FIN 371. Principles of Investments **Credits: 3.00**

FIN 380. Elemental and Derivative Securities Analysis **Credits: 3.00**

Elective: 3 Credit Hours

Economics elective (400 level, not including ECON 490, ECON 499A) 3.00
Credit Hours

Total: 36-39 Credit Hours

Concentration in International and Development Economics

Students who elect a major in Economics with a concentration in International Economics are required to meet degree requirements and complete the courses listed below (which can also be used to satisfy degree requirements). In addition, students completing this course of study must have a genuine international experience (such as an internship or semester abroad) and must complete a foreign language through the civilization course, including all of the prerequisites for that course.

Economics Required Core Courses: 18-21 Credit Hours

International and Development Economics Concentration Courses: 12 Credit Hours

ECON 312. Comparative Economic Systems **Credits: 3.00**

ECON 365. Economic Development **Credits: 3.00**

ECON 370. International Trade and Trade Policies **Credits: 3.00**

ECON 372. International Finance and Payments **Credits: 3.00**

or

FIN 372. International Finance and Payments **Credits: 3.00**

Two 400-level economics electives: 6 Credit Hours

Total: 36-39 Credit Hours

Additional Information

In addition, students completing this course of study must have a genuine international experience (such as an internship or semester abroad) and must complete a foreign language through the civilization course, including all of the prerequisites for that course.

Concentration in Political Economy

Students who elect a major in Economics with a concentration in political economy are required to meet degree requirements and complete four of the following courses (which can also be used to satisfy degree requirements).

Economics Required Core Courses: 18-21 Credit Hours

Political Economics Concentration Courses

Choose four of the following: 12 Credit Hours

ECON 312. Comparative Economic Systems **Credits: 3.00**

ECON 326. Public Finance **Credits: 3.00**

ECON 327. Game Theory **Credits: 3.00**

ECON 405. Political Economy **Credits: 3.00**

ECON 426. Theory of Public Choice **Credits: 3.00**

ECON 455. Economics of Regulated Industries **Credits: 3.00**

Two 400-level economics electives: 0-6 Credit Hours

ECON 405, ECON 426 and/or ECON 455 also fulfill this 400-level elective requirement if taken to satisfy the 12 credit hour concentration requirement.

Total: 30-39 Credit Hours

Concentration in Quantitative Economics

Students who elect a major in Economics with a concentration in Quantitative Economics are required to meet degree requirements and complete two of the following courses (which can also be used to satisfy degree requirements).

Economics Required Core Courses: 18-21 Credit Hours

Choose three of the following four options: 9 Credit Hours

ECON 384. Mathematical Economics **Credits: 3.00**

ECON 431. Advanced Microeconomic Theory **Credits: 3.00**

or

ECON 432. Advanced Macroeconomics **Credits: 3.00**

(Credit may be received for either ECON 431 or ECON 432, but not both)

ECON 483. Applied Time Series Analysis **Credits: 3.00**

ECON 485. Advanced Econometrics **Credits: 3.00**

One 300- or 400-level economics elective: 3 Credit Hours

Total: 30-33 Credit Hours

Concentration in Socioeconomics

Students who elect a major in Economics with a concentration in Socioeconomics are required to meet Economics degree requirements and complete the following courses (which can also be used to satisfy degree requirements).

Economics Required Core Courses: 18–21 Credit Hours

Economics Electives

Choose four of the following: 12 Credit Hours

ECON 306. The Economics of Women and the Family **Credits: 3.00**
ECON 329. Health Economics **Credits: 3.00**
ECON 340. Economics of Natural Resources **Credits: 3.00**
ECON 360. Labor Economics **Credits: 3.00**
ECON 365. Economic Development **Credits: 3.00**
ECON 382. Urban Economics **Credits: 3.00**

Two 400-level economics electives: 6 Credit Hours

Total: 36–39 Credit Hours

Recommended Schedule for Majors

First Two Years

During the first two years, students should complete:

Most of the General Education program
ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**
ECON 201. Introduction to Microeconomics **Credits: 3.00**
ECON 284. Introduction to Quantitative Analysis in Economics **Credits: 3.00**
COB 191. Business Analytics I **Credits: 3.00**

Choose one of the following:

ISAT 151. Topics in Applied Calculus in ISAT [C3QR] **Credits: 4.00**
MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**
MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**
MATH 233. Calculus with Modeling I [C3QR] **Credits: 3.00**
MATH 235. Calculus I [C3QR] **Credits: 4.00**

Additional Information

Students are encouraged to take ECON 331 and/or ECON 332 in their sophomore year (provided that the course prerequisites have been met).

Third and Fourth Years

B.S. economics majors should complete ECON 331, ECON 332, and preferably ECON 385 by the end of their junior year. While most majors will complete the 400-level requirements in economics during their senior year, students may take a 400-level course during their junior year if the prerequisite for the course has been met. ECON 488 should be taken during the senior year.

Program Total: 120 Credit Hours

Economics Minor

Minor Requirements

Economics Minor

The minimum requirement for a minor in economics is 18 credit hours in economics, including ECON 200 and ECON 201. At least six credit hours of the remaining twelve credit hours must be 300- or 400- level economics courses. Students may not receive credit toward the minor in economics for both ECON 270 and ECON 370.

Credit by Examination

Credit in ECON 200 will be granted to students who achieve a grade of 4 or 5 on the Advanced Placement Test in Macroeconomics administered by the Educational Testing Service. Credit in ECON 201 will be granted to students who achieve a grade of 4 or 5 on the Advanced Placement Test in Microeconomics.

Preparation for Graduate Study in Economics

While not formal requirements, students intending to pursue graduate work in economics are encouraged to select as many of the following courses as possible:

Courses

ECON 384. Mathematical Economics **Credits: 3.00**
ECON 430. Monetary Theory **Credits: 3.00**
ECON 431. Advanced Microeconomic Theory **Credits: 3.00**
ECON 432. Advanced Macroeconomics **Credits: 3.00**
MATH 235. Calculus I [C3QR] **Credits: 4.00**
MATH 236. Calculus II **Credits: 4.00**
MATH 237. Calculus III **Credits: 4.00**
MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**
MATH 336. Elementary Differential Equations **Credits: 3.00**
PHIL 250. Introduction to Symbolic Logic **Credits: 3.00**

Department of Educational Foundations and Exceptionalities

Dannette Allen-Bronaugh, **Academic Unit Head**

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The Department of Educational Foundations and Exceptionalities offers programs in special education, inclusive education, teaching English to speakers of other languages and gifted education. All programs include extensive fieldwork to ensure varied experience working with children and families.

Education: Inclusive Early Childhood Education, B.S.

Program Description

The Bachelor of Science pre-professional program in Inclusive Early Childhood Education enables students to gain knowledge and understanding of early childhood inclusion (Birth-3rd grade) and practices that promote access, participation and support for young children and their families. Students completing the four-year degree program, when combined with the teacher dual licensure option, are prepared to serve as teachers of students with and without disabilities in a variety of inclusive educational placements.

The licensure program is designed to prepare resilient, culturally responsive educators who are advocates for young children and youth with and without disabilities that are not only qualified for the complexity of their professional

roles but also are reflective problem-solvers. This program offers a dual licensure in PreK-3rd grade and Early Childhood Special Education (birth-5 years)

The program includes extensive field experiences which occur each semester beginning in the student's sophomore year. Assessment of candidate performance includes evaluation of performance in individual courses and practicum, as well as other criteria. At various points throughout the program, there are formative and summative assessments where faculty committees review the overall performance of each candidate. Formative assessments will be used to advise candidates and develop a plan of action for addressing any concerns that have been identified by the faculty. Summative assessments will be used to identify those candidates who are not making satisfactory progress toward advancement to the next sequences of courses and experiences. If progress is unsatisfactory, the candidate will not be allowed to continue until any identified issues are corrected. In some cases, a candidate will be allowed to continue in the next semester, but there will be a plan of action for addressing any concerns that have been identified by the faculty.

Every student is assigned an adviser. Students should plan on regularly consulting their adviser.

It is important for students to understand that the undergraduate major in Inclusive Early Childhood Education does not lead to teacher-education licensure unless licensure requirements are completed. To qualify for a recommendation for licensure in Inclusive Early Childhood Education [Early Childhood Special Education (Birth-5 years) and general education curriculum (PreK-3rd Grade)], students must complete licensure requirements in addition to requirements for the Inclusive Early Childhood Education undergraduate major. These requirements include 22 credit hours of practicum and student teaching experiences. Please note that these credit hour requirements are included in the 120 credit hour requirements for the Bachelor of Science in Inclusive Early Childhood Education degree.

Admission Requirements

Students must meet specific requirements to be admitted to programs within the College of Education. These criteria can be found on the College of Education catalog page.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education	41
Bachelor of Science Degree Requirements	6
IECE Major	51
Licensure Requirements or Electives	22
Total	120

Major Requirements

IECE Professional Studies Core – Required

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**

EXED 200. Foundations of Exceptional Education **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

Total: 12 Credit Hours

IECE Courses – Required

EXED 429. Teaching Learners with Complex Care Needs **Credits: 3.00**

IECE 300. Issues and Trends in Inclusive Early Childhood Education **Credits: 3.00**

IECE 303. Development of Young Children Birth Through Age 8 **Credits: 3.00**

IECE 322. Curriculum and Instruction in Inclusive Early Childhood Education **Credits: 3.00**

IECE 324. Assessment of the Young Child **Credits: 3.00**

IECE 450. Contemporary Family Issues in Inclusive Education **Credits: 3.00**

IECE 460. Instructional Practices in Numeracy **Credits: 3.00**

IECE 462. Instructional Practices in Natural Sciences for Young Children **Credits: 3.00**

IECE 464. Instructional Practices in Social Studies for Young Children **Credits: 3.00**

IECE 466. Managing Classrooms and Guiding Behavior **Credits: 3.00**

IECE 470. Individualized Behavior Intervention for Young Children **Credits: 3.00**

LED 355. Inclusive Early Literacy Development and Acquisition **Credits: 3.00**

LED 456. Inclusive Literacy Learning in the Primary Grades **Credits: 3.00**

Total: 39 Credit Hours

Licensure Requirements or Electives

Licensure Requirements

Students who do not choose the licensure option will choose 22 credits of electives.

IECE 321. Initial Field Experience in IECE **Credits: 1.00-2.00** (1 credit hour, repeatable to 2 credit hours)

IECE 421. Intermediate Field Experience in IECE **Credits: 2.00** (2 credit hours, repeatable to 4 credit hours)

IECE 461. Advanced Field Experience in IECE **Credits: 2.00-3.00** (must be taken for three credit hours)

IECE 480. Student Teaching in Inclusive Early Childhood Education **Credits: 5.00** (5 credit hours, repeatable to 10 credit hours)

IECE 481. Seminar in Inclusive Early Childhood Education **Credits: 3.00**

Total: 22 Credit Hours

Total Credit Hours for Degree: 120 Credit Hours

Recommended Schedule for Majors

First Year – Fall

General Education **Credits: 12.00**

EXED 200. Foundations of Exceptional Education **Credits: 3.00**

Total: 15 Credit Hours

First Year – Spring

General Education **Credits: 6.00**

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00** (counts as a General Education course)

Total: 15 Credit Hours

Second Year – Fall

General Education

Credits / Units: 7.00

IECE 300. Issues and Trends in Inclusive Early Childhood Education **Credits: 3.00**

IECE 303. Development of Young Children Birth Through Age 8 **Credits: 3.00**

IECE 321. Initial Field Experience in IECE **Credits: 1.00-2.00**

Total: 14 Credit Hours

Second Year – Spring

General Education

Credits / Units: 7.00

IECE 321. Initial Field Experience in IECE **Credits: 1.00-2.00**

IECE 322. Curriculum and Instruction in Inclusive Early Childhood Education **Credits: 3.00**

IECE 324. Assessment of the Young Child **Credits: 3.00**

IECE 466. Managing Classrooms and Guiding Behavior **Credits: 3.00**

Total: 17 Credit Hours

Third Year – Fall

General Education **Credits: 3.00**

B.S. Degree Requirements **Credits: 3.00**

IECE 421. Intermediate Field Experience in IECE **Credits: 2.00**

IECE 450. Contemporary Family Issues in Inclusive Education **Credits: 3.00**

IECE 464. Instructional Practices in Social Studies for Young Children **Credits: 3.00**

LED 355. Inclusive Early Literacy Development and Acquisition **Credits: 3.00**

Total: 17 Credit Hours

Third Year – Spring

General Education **Credits: 3.00**

B.S. Degree Requirements **Credits: 3.00**
IECE 421. Intermediate Field Experience in IECE **Credits: 2.00**
IECE 460. Instructional Practices in Numeracy **Credits: 3.00**
IECE 462. Instructional Practices in Natural Sciences for Young Children **Credits: 3.00**
LED 456. Inclusive Literacy Learning in the Primary Grades **Credits: 3.00**

Total: 17 Credit Hours

Fourth Year - Fall

Electives **Credits: 3.00**
EXED 429. Teaching Learners with Complex Care Needs **Credits: 3.00**
IECE 461. Advanced Field Experience in IECE **Credits: 2.00-3.00** (*must be taken for three credit hours*)
IECE 470. Individualized Behavior Intervention for Young Children **Credits: 3.00**

Total: 12 Credit Hours

Fourth Year - Spring

IECE 480. Student Teaching in Inclusive Early Childhood Education **Credits: 5.00** (*5 credit hours, repeatable to 10 credit hours*)
IECE 481. Seminar in Inclusive Early Childhood Education **Credits: 3.00**

Total: 13 Credit Hours

Program Total: 120 Credit Hours

Education: Special Education, B.S.

Program Description

The Bachelor of Science pre-professional program in special education enables students to become knowledgeable about the characteristics, diagnosis and remediation of children with disabilities accessing the general education curriculum and in adapted curriculum settings. While in this program, students will have the opportunity to work with students with disabilities in elementary, middle and high schools across multiple school districts. They will learn from dedicated and engaged faculty members and have opportunities to participate in various scholarly activities inside and outside of the classroom. Students completing the four-year degree program, when combined with the teacher licensure option, are prepared to serve as teachers of students with disabilities in a variety of educational placements.

The licensure program is designed to prepare resilient, culturally responsive educators who are advocates for children and youth with disabilities that are not only qualified for the complexity of their professional roles but also are reflective problem-solvers.

Students enrolled in the program will complete both special education concentrations (accessing the general curriculum and adapted curriculum). The program includes extensive field experiences. Assessment of candidate performance includes evaluation of performance in individual courses and

practicums. Students are required to demonstrate satisfactory performance, which includes a minimum grade of "C" in all major and concentration coursework and a "satisfactory" score on all practicum evaluations (i.e. all indicators on the evaluation are within the satisfactory range). Key assessments will be used to identify those candidates who are not making satisfactory progress towards advancement to the next sequences of courses and experiences. If progress is unsatisfactory, the candidate will be given one additional attempt on the key assessment. The assessments will be used to advise candidates and develop a plan of action for addressing any concerns that have been identified by the faculty. In some cases, a candidate will be allowed to continue in the next semester, but there will be a plan of action for addressing any concerns that have been identified by the faculty.

Every student is assigned an adviser. Students should plan on consulting their adviser regularly.

It is important for students to understand that the undergraduate major in special education does **not** lead to teacher-education licensure unless licensure requirements are completed. To qualify for a recommendation for licensure in special education, general curriculum K-12 and adapted curriculum K-12, students must complete licensure requirements in addition to requirements for the special education undergraduate major. These requirements include 18 credit hours of practicum and student teaching experiences. Please note that these credit hour requirements are included in the 122 credit hour requirements for the Bachelor of Science in Special Education degree.

Admission Requirements

Students must meet specific requirements to be admitted to programs within the College of Education. These criteria can be found on the College of Education catalog page.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ^{1,2}	41
Bachelor of Science Degree Requirements	6
Professional Studies Core ²	9
Special Education Core (including both concentrations: Adapted and Accessing the General Curriculum K-12)	48
Licensure Requirements (or electives)	18
Total	122

Footnote

¹ The General Education program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within the major.

²General Education courses must include PSYC 160. While required for the major professional studies core, credits for PSYC 160 are counted in the General Education total of 41 credit hours.

Major Requirements

Professional Studies: 12 Credit Hours

(9 Credit Hours counted in major; 3 Credit Hours counted in General Education)

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**

EXED 200. Foundations of Exceptional Education **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00** *(these credits are counted in the General Education total, not the major total)*

Special Education Core: 24 Credit Hours

EDUC 303. Foundations of Curriculum and Instruction **Credits: 3.00**

EXED 303. Foundations of Classroom and Behavior Management **Credits: 3.00**

EXED 407. Transitions of Learners with Disabilities **Credits: 3.00 - 4.00** *(must be taken for 3.00 credit hours)*

EXED 474. Assessment and Evaluation in Special Education **Credits: 3.00**

EXED 475. Program Planning in Special Education **Credits: 3.00**

EXED 484. Inclusive Practices in Special Education **Credits: 3.00-4.00** *(must be taken for 3.00 credit hours)*

EXED 485. Systematic Behavioral Support and Interventions **Credits: 3.00**

LED 430. Development, Assessment and Instruction of Literacy: K-12 **Credits: 3.00**

Required Adapted Curriculum Concentration Courses: 12 Credit Hours

EXED 342. Characteristics of Learners with Low Incidence Disabilities Accessing the Adapted Curriculum **Credits: 3.00**

EXED 429. Teaching Learners with Complex Care Needs **Credits: 3.00**

EXED 343. Communication Language and Literacy for Learners on the Adapted Curriculum **Credits: 3.00**

EXED 473. Methods of Instruction for Learners Accessing the Adapted Curriculum **Credits: 3.00**

Required General Curriculum Concentration Courses: 12 Credit Hours

EXED 341. Characteristics of Learners with Disabilities Accessing the General Curriculum **Credits: 3.00**

EXED 450. Principles of Specialized Reading Instruction **Credits: 3.00**

EXED 477. Remedial Methods in Special Education **Credits: 3.00**

MAED 430. Teaching Mathematics in Grades K-12 **Credits: 3.00**

Licensure Requirements: 18 Credit Hours

Licensure requirements (18 credits) or electives (for students not pursuing licensure in special education. Will be decided between the student and the university adviser).

EXED 476. Practicum in Literacy and Assessment **Credits: 2.00 - 3.00** *(taken once for 2.00 credit hours)*

EXED 478. Supervised Practice in Special Education Methods **Credits: 1.00-3.00** *(taken twice at 2.00 credits for a total of 4.00 credit hours)*

EXED 480. Student Teaching in Special Education **Credits: 3.00 - 6.00** *(must be taken twice for a total of 8.00 credit hours)*

EXED 483. Teachers as Professionals **Credits: 1.00-3.00** *(must be taken twice at 1.00 credit for a total of 2.00 credit hours)*

EXED 486. Supervised Clinical Practice with Planning and Methods in Special Education **Credits: 2.00 - 3.00** *(taken once for 2.00 credit hours)*

Recommended Schedule for Majors

Refer to the Program Sequencing Guide found here: <https://www.jmu.edu/coe/efex/sped-4-yr-major-overview.shtml> in addition to consulting with your academic adviser.

First Year - Fall

EXED 200. Foundations of Exceptional Education **Credits: 3.00**

General Education courses **Credits: 12.00**

Total: 15 Credit Hours

First Year - Spring

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**

General Education courses **Credits: 9.00**

Total: 15 Credit Hours

Second Year - Fall

EDUC 303. Foundations of Curriculum and Instruction **Credits: 3.00**

EXED 303. Foundations of Classroom and Behavior Management **Credits: 3.00**

General Education courses **Credits: 9.00**

Total: 15 Credit Hours

Second Year - Spring

EXED 341. Characteristics of Learners with Disabilities Accessing the General Curriculum **Credits: 3.00**

EXED 342. Characteristics of Learners with Low Incidence Disabilities Accessing the Adapted Curriculum **Credits: 3.00**

EXED 343. Communication Language and Literacy for Learners on the Adapted Curriculum **Credits: 3.00**

MAED 430. Teaching Mathematics in Grades K-12 **Credits: 3.00**

General Education courses **Credits: 4.00**

Total: 16 Credit Hours

Third Year - Fall

EXED 474. Assessment and Evaluation in Special Education **Credits: 3.00**
EXED 484. Inclusive Practices in Special Education **Credits: 3.00-4.00** (*must be taken for 3.00 credit hours*)
EXED 486. Supervised Clinical Practice with Planning and Methods in Special Education **Credits: 2.00 - 3.00** (*taken once for 2.00 credit hours*)
LED 430. Development, Assessment and Instruction of Literacy: K-12 **Credits: 3.00**
General Education courses **Credits: 6.00**

Total: 17 Credit Hours

Third Year - Spring

EXED 407. Transitions of Learners with Disabilities **Credits: 3.00 - 4.00** (*must be taken for 3.00 credit hours*)
EXED 450. Principles of Specialized Reading Instruction **Credits: 3.00**
EXED 475. Program Planning in Special Education **Credits: 3.00**
EXED 476. Practicum in Literacy and Assessment **Credits: 2.00 - 3.00** (*taken once for 2.00 credit hours*)
Bachelor of Science courses **Credits: 6.00**
General Education course **Credit: 1.00**

Total: 18 Credit Hours

Fourth Year - Fall

EXED 478. Supervised Practice in Special Education Methods **Credits: 1.00-3.00** (*taken for 2.00 credit hours*)
EXED 480. Student Teaching in Special Education **Credits: 3.00 - 6.00** (*must be taken for 4.00 credit hours*)
EXED 483. Teachers as Professionals **Credits: 1.00-3.00** (*must be taken for 1.00 credit hour*)
EXED 485. Systematic Behavioral Support and Interventions **Credits: 3.00**

Complete one of the following:

EXED 473. Methods of Instruction for Learners Accessing the Adapted Curriculum **Credits: 3.00**
EXED 477. Remedial Methods in Special Education **Credits: 3.00**

Total: 13 Credit Hours

Fourth Year - Spring

EXED 429. Teaching Learners with Complex Care Needs **Credits: 3.00**
EXED 478. Supervised Practice in Special Education Methods **Credits: 1.00-3.00** (*taken for 2.00 credit hours*)
EXED 480. Student Teaching in Special Education **Credits: 3.00 - 6.00** (*must be taken for 4.00 credit hours*)
EXED 483. Teachers as Professionals **Credits: 1.00-3.00** (*must be taken for 1.00 credit hour*)

Complete one of the following:

EXED 473. Methods of Instruction for Learners Accessing the Adapted Curriculum **Credits: 3.00**
EXED 477. Remedial Methods in Special Education **Credits: 3.00**

Total: 13 Credit Hours

Program Total: 122 Credit Hours

Education: Teaching English to Speakers of Other Languages, B.S.

Program Description

Coordinator: Katya Koubek
Phone: (540) 568-6760
Email: koubekex@jmu.edu

The Teaching English to Speakers of Other Languages (TESOL) major offers licensure preparation for PK-12 Teaching English to Speakers of Other Languages (TESOL). This TESOL pre-professional major enables students to become knowledgeable about the theories of linguistics, research on social and cultural variables that influence language acquisition, and the knowledge required to facilitate and assess language instruction in content areas, and laws governing the education of children for whom English is not their native language. This program will prepare future educators to understand and implement equitable and effective ways of working with English learners (ELs) in a variety of contexts, including inclusion in content/general education classes, sheltered-ESL classes and pullout classes.

Completion of the four-year major, when combined with teacher licensure courses (20 credit hours) leads to eligibility for a Virginia teaching license for PK-12 English as a Second Language. Major and additional licensure requirements can be completed within the 123-credit hour structure of the Bachelor of Science undergraduate degree in TESOL.

The College of Education's TESOL Program is interested in candidates who are committed to social justice and to creating affirming and academically challenging learning environments.

Students considering PK-12 initial licensure in TESOL follow the process described below:

All teacher education admission requirements are submitted through the Education Support Center, located in Memorial Hall, room 7230. Candidates must be fully admitted into teacher education before they can register for certain designated undergraduate education courses.

Teacher education candidates must maintain an overall GPA of 2.5 or better and complete general education courses with a minimum grade of "C." Candidates must also complete TESOL major content courses with a minimum grade of "C."

Candidates must apply to student teach one year prior to their student teaching semester.

Admission Requirements

Students must meet specific requirements to be admitted to programs within the College of Education. These criteria can be found on the College of Education catalog page.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Bachelor of Science Quantitative requirement	3
Bachelor of Science Scientific Literacy requirement	3-4
Teaching English to Speakers of Other Languages	51
Minor requirements	18
Foreign Language or Electives	3-4
Total	120

Footnote

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

Major Requirements

Educational Foundations Core: 9 Credit Hours

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**

EXED 200. Foundations of Exceptional Education **Credits: 3.00**

TESOL Core: 42 Credit Hours

ENG 308. Introduction to Linguistics **Credits: 3.00**

EXED 303. Foundations of Classroom and Behavior Management **Credits: 3.00**

LED 366. Early Literacy Development and Acquisition **Credits: 3.00**

LED 435. Literacy Development and Instruction for English Language Learners **Credits: 3.00**

TESL 310. Pedagogical Grammar **Credits: 3.00**

TESL 381. Practicum in TESOL Instructional Strategies **Credits: 3.00**

TESL 382. Practicum in TESOL First/2nd Language Acquisition **Credits: 1.00**

TESL 383. Practicum in TESOL Literacy Development **Credits: 1.00**

TESL 384. Practicum in Literacy Development **Credits: 1.00**

TESL 300. Introduction to Second Language Acquisition **Credits: 3.00**

TESL 428. Language Assessment for Multilingual Learners **Credits: 3.00**

TESL 470. Methods in Teaching English to Speakers of Other Languages **Credits: 3.00**

TESL 480. Student Teaching/Internship **Credits: 5.00**

TESL 481. Student Teaching Seminar in TESOL **Credits: 1.00**

TESL 482. Field Work in Professional Development, Partnership and Advocacy Seminar

Credits: 1.00

Major Requirements Total: 51 Credit Hours

Recommended Schedule for Majors

First Year - Fall

General Education Cluster One **Credits: 9.00**

General Education Cluster Two **Credits: 6.00**

Total: 15 Credit Hours

First Year - Spring

General Education Cluster Two **Credits: 3.00**

General Education Cluster Three **Credits: 6.00-7.00**

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

Total: 15-16 Credit Hours

Second Year - Fall

General Education Cluster Three **Credits: 3.00-4.00**

General Education Cluster Four **Credits: 3.00**

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**

EXED 200. Foundations of Exceptional Education **Credits: 3.00**

Credits / Units: 3.00-4.00

Total: 15-16 Credit Hours

Second Year - Spring

General Education Cluster Four **Credits: 3.00**

B.S. Degree Scientific Literacy Requirement **Credits: 3.00-4.00**

Minor Requirements **Credits: 3.00**

EXED 303. Foundations of Classroom and Behavior Management **Credits: 3.00**

TESL 382. Practicum in TESOL First/2nd Language Acquisition **Credits: 1.00**

TESL 300. Introduction to Second Language Acquisition **Credits: 3.00**

Total: 16-17 Credit Hours

Third Year - Fall

General Education Cluster Five **Credits: 3.00**

B.S. Degree Quantitative Requirement **Credits: 3.00**

Minor Requirement **Credits: 3.00**

ENG 308. Introduction to Linguistics **Credits: 3.00**

LED 366. Early Literacy Development and Acquisition **Credits: 3.00**

TESL 384. Practicum in Literacy Development **Credits: 1.00**

Total: 16 Credit Hours

Third Year - Spring

Foreign Language or Elective **Credits: 3.00**

Minor Requirement **Credits: 3.00**

TESL 310. Pedagogical Grammar **Credits: 3.00**

TESL 381. Practicum in TESOL Instructional Strategies **Credits: 3.00**

TESL 470. Methods in Teaching English to Speakers of Other Languages **Credits: 3.00**

Total: 15 Credit Hours

Fourth Year - Fall

Foreign Language or Elective **Credits: 3.00**

Minor Requirement **Credits: 6.00**

LED 435. Literacy Development and Instruction for English Language Learners **Credits: 3.00**

TESL 383. Practicum in TESOL Literacy Development **Credits: 1.00**

TESL 428. Language Assessment for Multilingual Learners **Credits: 3.00**

Total: 16 Credit Hours

Fourth Year - Spring

TESL 480. Student Teaching/Internship **Credits: 5.00**

TESL 481. Student Teaching Seminar in TESOL **Credits: 1.00**

TESL 482. Field Work in Professional Development, Partnership and Advocacy Seminar **Credits: 1.00**

Total: 12 Credit Hours

Program Total: 120 Credit Hours

Teaching English to Speakers of Other Languages Minor

Katya Koubek, **Coordinator**

Phone: (540) 568-6760

Email: koubekex@jmu.edu

The minor in TESOL is designed for students in various fields who wish to acquire professional knowledge related to teaching English to speakers of other languages. Students will gain skills in cross-cultural competence, understand and implement equitable, evidence-based ways of working with multilingual learners, and become familiar with the processes of first and second language acquisition. Students will acquire a foundational knowledge of effective teaching practices to assist and assess multilingual learners. The TESOL minor requires a minimum of 19 credit hours; 16 credits are required core courses and 3 credits are electives selected in consultation with a program adviser.

Requirements

Required Courses 16 Credit Hours

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**

LED 430. Development, Assessment and Instruction of Literacy: K-12 **Credits: 3.00**

TESL 300. Introduction to Second Language Acquisition **Credits: 3.00**

TESL 428. Language Assessment for Multilingual Learners **Credits: 3.00**

TESL 385. Practicum in TESOL **Credits: 1.00-3.00** (TESL 385 must be taken for one credit hour)

TESL 470. Methods in Teaching English to Speakers of Other Languages **Credits: 3.00**

¹

Electives (choose one): 3 Credit Hours

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

ENG 308. Introduction to Linguistics **Credits: 3.00**

EXED 303. Foundations of Classroom and Behavior Management **Credits: 3.00**

TESL 310. Pedagogical Grammar **Credits: 3.00**

Total: 19 Credit Hours

Footnote

¹ This course has an additional one credit practicum, TESL 385.

Department of Engineering

Adebayo Ogundipe, **Department Head**

Phone: (540) 568-4964

Email: ogundiaa@jmu.edu

Location: Engineering/Geosciences 1122

Website: <http://www.jmu.edu/engineering>

Professor

K. Gipson, S. Harper, S. Holland, S. Morton, J. Nagel, R. Nagel, A. Ogundipe, R. Prins, B. Striebig

Associate Professors

J. Forsyth, J. Henriques, H. Kirkvold,

Assistant Professors

D. Castaneda, S. Joshi, S. Woodruff

Mission

Through an engineering curriculum grounded in effective instructional practices, we nurture an engaged educational community of conscientious and adaptable learners who develop solutions for the betterment of society.

Objectives

The JMU Engineering program provides an eight-semester project-driven platform for students to contribute engineering work for sustainable societies. We seek engineers who are eager to:

understand the needs of people and communities, effectively communicate with project partners, and provide leadership for diverse teams,

make beneficial solutions for society and the planet using innovation, design thinking, engineering analyses, and an understanding of complexities involved in real projects.

function effectively in the work environment with integrity and professionalism, and

demonstrate a commitment to professional development through self-motivated learning, career advancement, or advanced studies.

The Bachelor of Science in Engineering is a single cross disciplinary engineering degree that integrates many traditional engineering disciplines with course work in business, project management, engineering, design and liberal arts. The foci of the program are sustainability, engineering design and project delivery.

Engineering for a sustainable world is, in short, a body of knowledge and set of holistic analytical design skills that contribute to the development of products, processes, services and infrastructure that simultaneously protect the environment, conserve resources and meet human needs at an acceptable financial cost. By reframing traditional engineering practice, sustainability provides a way of moving toward the development of sustainable societies, where human quality of life is advanced with a minimum impact on finite resources and the environment.

This modern, project-based, engineering curriculum spans many areas of engineering to create adaptable engineers with practical know-how.

The curriculum is ABET accredited and prepares students for the Fundamentals of Engineering (FE) pre-licensure examination. Graduates will be prepared to succeed in the engineering workforce or in advanced engineering degree programs by accumulating a professional portfolio of engineering project experiences throughout the curriculum.

Career Opportunities

Upon graduation, alumni will be prepared for a wide range of opportunities in the engineering workforce or in graduate school. Typical fields of engineering that students will be prepared to enter include sustainable design, process design, product design, process engineering, project management and systems engineering. Other industry options include product service system design, technical sales, management training and technical marketing.

A wide range of graduate school options include master's and doctoral programs in civil engineering, environmental engineering, industrial engineering, materials engineering, mechanical engineering and systems engineering. Other postgraduation options include business school, law school, AmeriCorps, Peace Corps, military service, entrepreneurship (starting a small business), applied science fields, international experiences, medical school and careers in politics/public policy.

Some examples of the industries that hire engineers include, among others, design and build companies, aeronautic firms, automobile manufacturers, colleges and universities, computer service and software firms, consulting firms, energy systems firms, federal contractors, federal, state and local governments (e.g., NASA, EPA, NIST, DOD, DOE), non-profit agencies, manufacturing firms, inspection agencies, mining and petroleum firms, pharmaceutical and medical research companies, research and development laboratories, telecommunication companies, and waste management and recycling firms.

Admission and Retention Requirements

Information on admission to programs within the Department of Engineering, retention and minimum grade requirements may be found on the individual program pages listed below:

Engineering, B.S.

Program Description

JMU Engineering is an ABET accredited, 4-year interdisciplinary Bachelor of Science degree program. It offers a world-class undergraduate engineering experience based on a philosophy of learning by doing. It integrates many traditional engineering disciplines with course work in project management, engineering, design and liberal arts with foci on sustainable design and project delivery.

Admission and Retention Requirements

Admission to the Major

To be eligible for admission into the B.S. in engineering program, students must have completed the following:

Courses (or approved equivalents) required for the engineering major with a minimum grade of "C-":

MATH 235, MATH 236, MATH 237, MATH 238
 PHYS 240, PHYS 240L, PHYS 250, PHYS 250L
 CHEM 131, CHEM 131L and CHEM 132, CHEM 132L

Courses (or approved equivalents) required for the engineering major with a minimum grade of "C":

ENGR 112, ENGR 212, ENGR 221, ENGR 231, ENGR 232

Any of the preceding courses may only be repeated once to be considered for admission.

For students transferring from a program with an existing articulation agreement, the student coordinator will work with the engineering Academic Unit Head to assess the relative merit of transfer students with qualifying transcripts.

Progressing in the Major

Once admitted to the engineering program, students must maintain a minimum in-major and cumulative GPA of 2.0.

Once admitted, any course required as part of the engineering major may only be repeated once.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41

Degree Requirements	Credit Hours
Quantitative requirement ²	3
Scientific Literacy requirement ²	3
Major requirements (listed below) and electives	80
Total	127

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² In addition to course work taken to fulfill General Education requirement.

Additional Information

Students must complete a total of nine hours of approved electives, including at least six hours of technical electives. Students may not use courses required for the engineering major to fulfill elective requirements.

Technical Electives: Must include at least three credit hours of ENGR 440–ENGR 479. Up to three credit hours of technical electives may be from ENGR 480 or ENGR 498.

Free electives: May include up to three credit hours of any other 300 or 400 level courses at JMU (both ENGR and non-ENGR courses are eligible). This may include courses that qualify as technical electives but were not used to meet the technical elective requirement.

Recommended Schedule for Majors

First Year

Fall Semester

MATH 235. Calculus I [C3QR] **Credits: 4.00** ¹
 PHYS 240. University Physics I [C3PP] **Credits: 3.00** ²
 PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00** ²
 General Education *6 Credit Hours* ³

Total: 14 Credit Hours

Spring Semester

ENGR 112. Engineering Decisions **Credits: 3.00** (Engineering Decisions)
 General Education *3 Credit Hours* ³
 MATH 236. Calculus II **Credits: 4.00**
 PHYS 250. University Physics II **Credits: 3.00**
 PHYS 250L. University Physics Laboratory II **Credits: 1.00**

Total: 14 Credit Hours

Footnotes

¹ Also fulfills General Education requirement for Cluster Three, Group 1.

² Also fulfills General Education requirement for Cluster Three, Group 2.

³ Fulfills General Education requirement for Cluster One.

Second Year

Fall Semester

MATH 237. Calculus III **Credits: 4.00**
 CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
 CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
 ENGR 231. Engineering Design I **Credits: 2.00**
 General Education *6 Credit Hours*

Total: 16 Credit Hours

Spring Semester

MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**
 ENGR 212. Statics and Dynamics (3,1) **Credits: 4.00**
 ENGR 221. Engineering Management I: Product Development and Entrepreneurial Engineering **Credits: 3.00**
 ENGR 232. Engineering Design II **Credits: 2.00**
 CHEM 132. General Chemistry II **Credits: 3.00**
 CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

Total: 17 Credit Hours

Third Year

Fall Semester

ENGR 311. Fluid Mechanics **Credits: 4.00**
 ENGR 313. Circuits and Instrumentation **Credits: 4.00**
 ENGR 322. Engineering Management II: Engineering Project Management **Credits: 3.00**
 ENGR 331. Engineering Design III **Credits: 3.00**
 General Education *3 Credit Hours*

Total: 17 Credit Hours

Spring Semester

ENGR 312. Thermodynamics and Heat Transfer **Credits: 4.00**
 ENGR 314. Materials and Mechanics **Credits: 4.00**
 ENGR 332. Engineering Design IV **Credits: 3.00**
 Approved engineering elective *3 Credit Hours*
 General Education *3 Credit Hours*

Total: 17 Credit Hours

Fourth Year

Fall Semester

ENGR 411. Fundamentals of Sustainable Engineering and Design **Credits: 3.00**

ENGR 413. Systems Analysis **Credits: 3.00**

ENGR 431. Engineering Design V **Credits: 3.00**

Approved engineering elective *3 Credit Hours*

General Education *6 Credit Hours*

Total: 18 Credit Hours

Spring Semester

ENGR 412. Sustainable Engineering and Design II **Credits: 3.00**

ENGR 432. Engineering Design VI **Credits: 3.00**

Approved engineering elective *3 Credit Hours*

General Education *7 Credit Hours*

Total: 16 Credit Hours

Program Total: 127 Credit Hours

Department of English

Rebecca Childs, **Department Head**

Phone: (540) 568-6298

Location: Keezell Hall, Room 215

Website: <http://www.jmu.edu/english>

Professors

L. Alleyne, K. Castellano, E. Cavanagh, R. Childs, A. Federico, B. Hefner, L. Kutchins, D. Mookerjee-Leonard, B. Muhonja, B. Nowvieskie, M. Rankin, M. Rebhorn, M. Thompson, S. White

Associate Professors

D. Babcock, J. Burgers, S. Cote, A. Fagan, M. Godfrey, D. Goode, L. Henigman, D. Lo, H. Pennington, D. Phillips, S. Samatar, G. Wrenn

Assistant Professors

J. Baltazar, M. Delgadillo, A. Gerber, L. Harrison

Mission

Our mission is to prepare our students to be appreciative yet critical readers and creators of language, texts, and ideas, attending to the powerful link between the literary arts and the human condition. We develop in students the ability to write with clarity, creativity, and rhetorical power, and to recognize and explore the complex interaction between texts of various genres and diverse contexts of production and reception, that they may emerge with superior dexterity of reasoning, a heightened empathy, and an expanded worldview.

Goals

To build upon the skills introduced in the General Education program, the Department of English strives to:

Provide students advanced instruction in writing styles ranging from expository and creative writing to literary criticism.

Help students master advanced skills in analytical and critical thinking.

Develop skills in research and information access.

Career Opportunities

Careers that involve critical thinking, document analysis, or oral and written communication such as:

Career counseling

Corporate recruiting

Consulting

Editing

Educational administration

Film and food critic

Graduate school in English, creative writing, law and library science

Human resources

Insurance underwriting

Intelligence analyst

Law school

Library science (librarian, archivist, preservationist)

Literary agent

Literacy instructor

Lobbyist

Magazine writing and editing (print and online)

Marketing

Newspaper reporting/foreign correspondent

Non-profit advocacy and administration

Public relations and public affairs officer

Publishing

Research

Speech writer

Stockbroker

Teaching

Co-curricular Activities and Organizations

Iris (a literary and arts magazine)

Sigma Tau Delta (the National English Honor Society)

Sister Speak (JMU's feminist journal)

Cross Disciplinary Minors

English participates in the following cross disciplinary minors:

African, African American and Diaspora Studies Minor

American Studies Minor

Book Arts Minor

British Communication and Media Minor

Classical Studies Minor

Creative Writing Minor

Environmental Humanities Minor

Environmental Studies Minor

Film Studies Minor

Latin American, Latinx and Caribbean Studies Minor
Medical Humanities Minor
Medieval and Renaissance Studies Minor
Middle Eastern Communities and Migrations Minor
Modern European Studies Minor
Women's, Gender and Sexuality Studies Minor
World Literature Minor

English, B.A.

Program Description

Students majoring in English earn the B.A. degree unless they are completing an additional major in a degree program other than the B.A. The minimum requirement for a major in English is 36 credit hours of course work in the major.

The department recommends that students choose a variety of courses from among different periods and topics. Students progress through the major by taking ENG 299 and three 200-level surveys, and then moving on to 300-level courses and at least two 400-level Advanced Studies courses. They also fulfill three distributional overlay requirements.

Courses taken to fulfill General Education Cluster Two requirements may also fulfill requirements in the English major. Students may complete credit requirements by taking additional electives.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
Major requirements (listed below)	36
University electives	26-40
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures' placement exam.

Major Requirements

All students must include in their program the following:

Choose three ENG courses at the 200 level, according to groupings listed below **Credits: 9.00**

ENG 299. Writing About Literature **Credits: 3.00** ¹

Choose one course at the 200 or 300 level **Credits: 3.00**

Choose five courses from the 300 level **Credits: 15.00**

Choose two approved 400-level courses from the "Advanced Studies in..." courses **Credits: 6.00**

Footnote

¹ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

Choose one course from the following list of courses: 3 Credit Hours

ENG 235. Survey of English Literature: From Beowulf to the Eighteenth Century [C2L] **Credits: 3.00**

ENG 247. Survey of American Literature: From the Beginning to the Civil War [C2L] **Credits: 3.00**

Choose two courses from the following list of courses: 6 Credit Hours

(May not double-count course used to fulfill category above.)

ENG 221. Literature/Culture/Ideas [C2L] **Credits: 3.00**
or

ENG 222. Genre(s) [C2L] **Credits: 3.00**

ENG 235. Survey of English Literature: From Beowulf to the Eighteenth Century [C2L] **Credits: 3.00**

ENG 236. Survey of English Literature: Eighteenth Century to Modern [C2L] **Credits: 3.00**

ENG 239. Studies in World Literature [C2L] **Credits: 3.00**

ENG 247. Survey of American Literature: From the Beginning to the Civil War [C2L] **Credits: 3.00**

ENG 248. Survey of American Literature: From the Civil War to the Modern Period [C2L] **Credits: 3.00**

ENG 260. Survey of African American Literature [C2L] **Credits: 3.00**

The courses selected to fulfill the 300- and 400-level requirements must include the following:

One course at the 300 or 400 level, pre-1700:

ENG 301. Old English Language and Literature **Credits: 3.00**

ENG 306. The Bible as Literature **Credits: 3.00**

ENG 311. Medieval Literature and Culture **Credits: 3.00**

ENG 313. Studies in Early Modern Literature and Culture **Credits: 3.00**

ENG 316. Early Modern Drama **Credits: 3.00**

ENG 317. Studies in Shakespeare **Credits: 3.00**

ENG 319. Teaching Shakespeare **Credits: 3.00**

ENG 320L. Shakespeare on the Page and Stage in London **Credits: 3.00**

ENG 401. Advanced Studies in Medieval Literature **Credits: 3.00**
ENG 402. Advanced Studies in British Literature Before 1700 **Credits: 3.00**

One course at the 300 or 400 level, pre-1900:

ENG 301. Old English Language and Literature **Credits: 3.00**
ENG 306. The Bible as Literature **Credits: 3.00**
ENG 311. Medieval Literature and Culture **Credits: 3.00**
ENG 313. Studies in Early Modern Literature and Culture **Credits: 3.00**
ENG 316. Early Modern Drama **Credits: 3.00**
ENG 317. Studies in Shakespeare **Credits: 3.00**
ENG 319. Teaching Shakespeare **Credits: 3.00**
ENG 320L. Shakespeare on the Page and Stage in London **Credits: 3.00**
ENG 321. Restoration and Eighteenth Century British Prose and Poetry **Credits: 3.00**
ENG 322. Restoration and Eighteenth Century British Drama **Credits: 3.00**
ENG 325. Romantic Literature **Credits: 3.00**
ENG 327. Gothic Literature **Credits: 3.00**
ENG 329. Victorian Literature **Credits: 3.00**
ENG 330. Nineteenth Century British Novel **Credits: 3.00**
ENG 342. Early American Literature **Credits: 3.00**
ENG 343. Antebellum American Literature **Credits: 3.00**
ENG 344. Late Nineteenth Century American Literature **Credits: 3.00**
ENG 352. The American Novel to 1914 **Credits: 3.00**
ENG 363. Native American Literature **Credits: 3.00**
ENG 401. Advanced Studies in Medieval Literature **Credits: 3.00**
ENG 402. Advanced Studies in British Literature Before 1700 **Credits: 3.00**

One course from the Identity, Diversity and Power selections:

ENG 358. Oral Literature **Credits: 3.00**
ENG 359. Studies in African American Literature **Credits: 3.00**
ENG 360. Introduction to Ethnic American Literature **Credits: 3.00**
ENG 361. African American Fiction **Credits: 3.00**
ENG 362. African American Poetry **Credits: 3.00**
ENG 363. Native American Literature **Credits: 3.00**
ENG 364. Introduction to Asian American Literature **Credits: 3.00**
ENG 367. Latinx Literature **Credits: 3.00**
ENG 368. Women's Literature **Credits: 3.00**
ENG 369. Feminist Literary Theory **Credits: 3.00**
ENG 370. Queer Literature **Credits: 3.00**
ENG 374. Contemporary Global Anglophone Literature **Credits: 3.00**
ENG 377. Introduction to African Literature **Credits: 3.00**
ENG 378. Studies in South Asian Literature **Credits: 3.00**
ENG 379. Literature and Empire **Credits: 3.00**
ENG 408. Advanced Studies in African American Literature **Credits: 3.00**
ENG 423. Advanced Studies in Gender and Sexuality in Literature **Credits: 3.00**
ENG 432. Advanced Studies in African Literature **Credits: 3.00**
ENG 434. Advanced Studies in Latin American Literature in Translation **Credits: 3.00**
or
SPAN 434. Advanced Studies in Latin American Literature in Translation **Credits: 3.00**
ENG 466. Advanced Studies in Women's Literature **Credits: 3.00**

Two courses at the 400 level:

ENG 401. Advanced Studies in Medieval Literature **Credits: 3.00**
ENG 402. Advanced Studies in British Literature Before 1700 **Credits: 3.00**
ENG 403. Advanced Studies in British Literature After 1700 **Credits: 3.00**
ENG 405. Advanced Studies in Anglophone Literature **Credits: 3.00**
ENG 407. Advanced Studies in American Literature **Credits: 3.00**
ENG 408. Advanced Studies in African American Literature **Credits: 3.00**
ENG 410. Advanced Studies in Author **Credits: 3.00**
ENG 413. Advanced Studies in Literature and Ideas **Credits: 3.00**
ENG 414. Advanced Studies in Genre **Credits: 3.00**
ENG 415. Advanced Studies in Textuality and the History of the Book **Credits: 3.00**
ENG 417. Advanced Studies in Linguistics and the English Language **Credits: 3.00**
ENG 420. Advanced Studies in Theory and Cultural Studies **Credits: 3.00**
ENG 423. Advanced Studies in Gender and Sexuality in Literature **Credits: 3.00**
ENG 430. Advanced Studies in Comparative Literature **Credits: 3.00**
ENG 432. Advanced Studies in African Literature **Credits: 3.00**
ENG 433. Advanced Studies in Arabic Literature **Credits: 3.00**
ENG 434. Advanced Studies in Latin American Literature in Translation **Credits: 3.00**
ENG 439. Advanced Studies in Major Authors of Literature in Spanish in Translation **Credits: 3.00**
ENG 466. Advanced Studies in Women's Literature **Credits: 3.00**

Electives: 9 Credit Hours

Electives may be fulfilled by courses within a concentration. Electives may also meet the 300- or 400-level course requirements.

Major Requirements Total: 36 Credit Hours

Concentrations

In consultation with their advisers, students may choose nine credit hours of courses at the 300- or 400-level that acquaint them with the scope of one of the fields below. Students may consult with their advisers and individual professors about additional courses that may, because of content covered in a particular semester, be eligible for a concentration by special permission.

British Literature

Select appropriate courses in consultation with adviser.

American Literature

Select appropriate courses in consultation with adviser.

World Literature

ENG 305. Mythology **Credits: 3.00**
ENG 306. The Bible as Literature **Credits: 3.00**
ENG 358. Oral Literature **Credits: 3.00**
ENG 360. Introduction to Ethnic American Literature **Credits: 3.00**
ENG 361. African American Fiction **Credits: 3.00**
ENG 362. African American Poetry **Credits: 3.00**
ENG 363. Native American Literature **Credits: 3.00**
ENG 364. Introduction to Asian American Literature **Credits: 3.00**
ENG 368. Women's Literature **Credits: 3.00**

ENG 377. Introduction to African Literature **Credits: 3.00**
 ENG 378. Studies in South Asian Literature **Credits: 3.00**
 ENG 379. Literature and Empire **Credits: 3.00**
 ENG 405. Advanced Studies in Anglophone Literature **Credits: 3.00**
 ENG 408. Advanced Studies in African American Literature **Credits: 3.00**
 ENG 423. Advanced Studies in Gender and Sexuality in Literature **Credits: 3.00**
 ENG 430. Advanced Studies in Comparative Literature **Credits: 3.00**
 ENG 432. Advanced Studies in African Literature **Credits: 3.00**
 ENG 433. Advanced Studies in Arabic Literature **Credits: 3.00**
 ENG 434. Advanced Studies in Latin American Literature in Translation **Credits: 3.00**
 or
 SPAN 434. Advanced Studies in Latin American Literature in Translation **Credits: 3.00**
 ENG 436. Studies in German Literature **Credits: 3.00**
 or
 GER 436. Studies in German Literature **Credits: 3.00**
 ENG 437. Studies in Italian Literature **Credits: 3.00**
 or
 ITAL 437. Studies in Italian Literature **Credits: 3.00**
 ENG 438. Studies in Russian Literature **Credits: 3.00**
 or
 RUS 438. Studies in Russian Literature **Credits: 3.00**
 ENG 439. Advanced Studies in Major Authors of Literature in Spanish in Translation **Credits: 3.00**
 or
 SPAN 439. Major Authors of Literature in Spanish in Translation **Credits: 3.00**
 ENG 466. Advanced Studies in Women's Literature **Credits: 3.00**

Environmental Literature and Writing

ENG 363. Native American Literature **Credits: 3.00**
 ENG 371. Literature and the Environment **Credits: 3.00**
 ENG 390. The Environmental Imagination **Credits: 3.00**

Language and Theory

ENG 301. Old English Language and Literature **Credits: 3.00**
 ENG 303. History of the English Language **Credits: 3.00**
 ENG 308. Introduction to Linguistics **Credits: 3.00**
 ENG 309. Traditional English Grammar **Credits: 3.00**
 ENG 310. Modern English Grammar **Credits: 3.00**
 ENG 348. Studies in Linguistics and the English Language **Credits: 3.00**
 ENG 358. Oral Literature **Credits: 3.00**
 ENG 366. Contemporary Critical Theory **Credits: 3.00**
 ENG 369. Feminist Literary Theory **Credits: 3.00**
 ENG 417. Advanced Studies in Linguistics and the English Language **Credits: 3.00**
 ENG 420. Advanced Studies in Theory and Cultural Studies **Credits: 3.00**

Print Culture

ENG 313. Studies in Early Modern Literature and Culture **Credits: 3.00**
 ENG 358. Oral Literature **Credits: 3.00**
 ENG 415. Advanced Studies in Textuality and the History of the Book **Credits: 3.00**

Gender and Sexuality Studies

ENG 327. Gothic Literature **Credits: 3.00**
 ENG 368. Women's Literature **Credits: 3.00**
 ENG 369. Feminist Literary Theory **Credits: 3.00**
 ENG 370. Queer Literature **Credits: 3.00**
 ENG 423. Advanced Studies in Gender and Sexuality in Literature **Credits: 3.00**
 ENG 466. Advanced Studies in Women's Literature **Credits: 3.00**

Race and Ethnicity Studies

ENG 358. Oral Literature **Credits: 3.00**
 ENG 360. Introduction to Ethnic American Literature **Credits: 3.00**
 ENG 361. African American Fiction **Credits: 3.00**
 ENG 362. African American Poetry **Credits: 3.00**
 ENG 363. Native American Literature **Credits: 3.00**
 ENG 364. Introduction to Asian American Literature **Credits: 3.00**
 ENG 377. Introduction to African Literature **Credits: 3.00**
 ENG 378. Studies in South Asian Literature **Credits: 3.00**
 ENG 379. Literature and Empire **Credits: 3.00**
 ENG 408. Advanced Studies in African American Literature **Credits: 3.00**
 ENG 432. Advanced Studies in African Literature **Credits: 3.00**
 ENG 433. Advanced Studies in Arabic Literature **Credits: 3.00**

Creative Writing

Students with a strong interest in writing should include in their program nine credit hours of electives from the following courses.

Choose three of the following:

ENG 347. Playwriting **Credits: 3.00**
 or
 THEA 347. Playwriting **Credits: 3.00**
 ENG 390. The Environmental Imagination **Credits: 3.00**
 ENG 391. Introduction to Creative Writing – Nonfiction **Credits: 3.00**
 ENG 392. Introduction to Creative Writing – Poetry **Credits: 3.00**
 ENG 393. Introduction to Creative Writing – Fiction **Credits: 3.00**
 ENG 483. Narrative Form **Credits: 3.00**
 ENG 484. Poetic Craft and Creativity **Credits: 3.00**
 ENG 493. Advanced Creative Nonfiction **Credits: 3.00**
 ENG 494. Advanced Poetry Writing **Credits: 3.00**
 ENG 495. Advanced Fiction Writing **Credits: 3.00**
 ENG 496. Advanced Topics in Creative Writing **Credits: 3.00**

Additional information for English teaching licensure

For students interested in pursuing English teacher licensure, refer to the English Teaching Licensure program for specific requirements.

Additional Information

Other courses may be applied to these requirements via course directive. Students should consult advisers and the departmental semester list about other options.

Program Total: 120 Credit Hours

Recommended Schedule for Majors

First Year

Foreign language courses **Credits: 6.00 - 8.00**

General Education courses **Credits: 23.00**

First Year Total: 29-31 Credit Hours

Second Year

Two of three required courses from among ENG 221-ENG 260 **Credits: 6.00**

ENG 299. Writing About Literature **Credits: 3.00**

General Education courses **Credits: 15.00**

Foreign language courses **Credits: 6.00**

Second Year Total: 30 Credit Hours

Third Year

Remaining requirement from General Education **Credits: 3.00**

English 300-level courses **Credits: 12.00 - 15.00**

Other electives **Credits: 15.00**

Third Year Total: 30 Credit Hours

Fourth Year

English 400 level advanced studies courses **Credits: 6.00**

English 300-400 level courses **Credits: 6.00 - 9.00**

Other electives **Credits: 15.00 - 18.00**

Fourth Year Total: 29-31 Credit Hours

English Teaching Licensure

Licensure Requirements

Students interested in becoming secondary education English teachers (grades 6-12) must meet specific curriculum requirements in order to qualify for English teacher licensure. Many of these requirements may also count as part of the 36 credit hour English major requirements.

Required Courses: 6 Credit Hours

LED 254. Literature for Adolescents **Credits: 3.00**¹

ENG 299. Writing About Literature **Credits: 3.00**

Required Literature Survey: 3 Credit Hours

Choose one of the following courses:

ENG 235. Survey of English Literature: From Beowulf to the Eighteenth Century [C2L]

Credits: 3.00

or

ENG 247. Survey of American Literature: From the Beginning to the Civil War [C2L]

Credits: 3.00

Additional Literature Surveys: 6 Credit Hours

Choose two of the following courses:

ENG 235. Survey of English Literature: From Beowulf to the Eighteenth Century [C2L]

Credits: 3.00¹

ENG 236. Survey of English Literature: Eighteenth Century to Modern [C2L] **Credits:**

3.00¹

ENG 239. Studies in World Literature [C2L] **Credits: 3.00**

ENG 247. Survey of American Literature: From the Beginning to the Civil War [C2L]

Credits: 3.00

ENG 248. Survey of American Literature: From the Civil War to the Modern Period [C2L]

Credits: 3.00

ENG 260. Survey of African American Literature [C2L] **Credits: 3.00**

Footnotes

¹ LED 254 will not fulfill any requirement in the English, B.A. degree program.

² ENG 235 and ENG 247 may not double count for the Required Literature Survey course and the Additional Literature Surveys courses.

English Grammar: 3 Credit Hours

Choose one of the following:

ENG 303. History of the English Language **Credits: 3.00**

ENG 308. Introduction to Linguistics **Credits: 3.00**

ENG 309. Traditional English Grammar **Credits: 3.00**

ENG 310. Modern English Grammar **Credits: 3.00**

Shakespeare: 3 Credit Hours

Choose one of the following:

ENG 317. Studies in Shakespeare **Credits: 3.00**

ENG 319. Teaching Shakespeare **Credits: 3.00**

ENG 320L. Shakespeare on the Page and Stage in London **Credits: 3.00**

Writing: 3 Credit Hours

Choose one of the following:

ENG 390. The Environmental Imagination **Credits: 3.00**

ENG 391. Introduction to Creative Writing – Nonfiction **Credits: 3.00**

ENG 392. Introduction to Creative Writing – Poetry **Credits: 3.00**

ENG 393. Introduction to Creative Writing – Fiction **Credits: 3.00**

ENG 396. Advanced Composition **Credits: 3.00**

Additional Courses

If not already taken in one of the categories above or as part of the English B.A. requirements:

At least one course in American literature

At least one course in British literature

At least one course in World literature

At least one course in African American literature

At least one course in Gender and Sexuality

At least one course in pre-1700 literature

At least one course in pre-1900 literature

Some of these courses may fulfill more than one category in the English major requirements.

World Literature Courses:

The following courses will fulfill the world literature requirement:

ENG 239. Studies in World Literature [C2L] **Credits: 3.00**

ENG 358. Oral Literature **Credits: 3.00**

ENG 374. Contemporary Global Anglophone Literature **Credits: 3.00**

ENG 376. Introduction to Scottish Literature **Credits: 3.00**

ENG 377. Introduction to African Literature **Credits: 3.00**

ENG 378. Studies in South Asian Literature **Credits: 3.00**

ENG 379. Literature and Empire **Credits: 3.00**

ENG 405. Advanced Studies in Anglophone Literature **Credits: 3.00**

ENG 432. Advanced Studies in African Literature **Credits: 3.00**

ENG 433. Advanced Studies in Arabic Literature **Credits: 3.00**

ENG 434. Advanced Studies in Latin American Literature in Translation **Credits: 3.00**

African American Literature Courses:

The following courses will fulfill the African American literature requirement:

ENG 260. Survey of African American Literature [C2L] **Credits: 3.00**

ENG 359. Studies in African American Literature **Credits: 3.00**

ENG 361. African American Fiction **Credits: 3.00**

ENG 362. African American Poetry **Credits: 3.00**

ENG 408. Advanced Studies in African American Literature **Credits: 3.00**

Gender and Sexuality Courses:

The following courses will fulfill the gender and sexuality requirement:

ENG 368. Women's Literature **Credits: 3.00**

ENG 369. Feminist Literary Theory **Credits: 3.00**

ENG 370. Queer Literature **Credits: 3.00**

ENG 423. Advanced Studies in Gender and Sexuality in Literature **Credits: 3.00**

ENG 466. Advanced Studies in Women's Literature **Credits: 3.00**

Pre-1700 Courses:

The following courses will fulfill the pre-1700 requirement:

ENG 301. Old English Language and Literature **Credits: 3.00**

ENG 306. The Bible as Literature **Credits: 3.00**

ENG 311. Medieval Literature and Culture **Credits: 3.00**

ENG 313. Studies in Early Modern Literature and Culture **Credits: 3.00**

ENG 316. Early Modern Drama **Credits: 3.00**

ENG 317. Studies in Shakespeare **Credits: 3.00**

ENG 319. Teaching Shakespeare **Credits: 3.00**

ENG 320L. Shakespeare on the Page and Stage in London **Credits: 3.00**

ENG 401. Advanced Studies in Medieval Literature **Credits: 3.00**

ENG 402. Advanced Studies in British Literature Before 1700 **Credits: 3.00**

Pre-1900 Courses:

The following courses will fulfill the pre-1900 requirement:

ENG 301. Old English Language and Literature **Credits: 3.00**

ENG 306. The Bible as Literature **Credits: 3.00**

ENG 311. Medieval Literature and Culture **Credits: 3.00**

ENG 313. Studies in Early Modern Literature and Culture **Credits: 3.00**

ENG 316. Early Modern Drama **Credits: 3.00**

ENG 317. Studies in Shakespeare **Credits: 3.00**

ENG 319. Teaching Shakespeare **Credits: 3.00**

ENG 320L. Shakespeare on the Page and Stage in London **Credits: 3.00**

ENG 321. Restoration and Eighteenth Century British Prose and Poetry **Credits: 3.00**

ENG 322. Restoration and Eighteenth Century British Drama **Credits: 3.00**

ENG 325. Romantic Literature **Credits: 3.00**

ENG 327. Gothic Literature **Credits: 3.00**

ENG 329. Victorian Literature **Credits: 3.00**

ENG 330. Nineteenth Century British Novel **Credits: 3.00**

ENG 342. Early American Literature **Credits: 3.00**

ENG 343. Antebellum American Literature **Credits: 3.00**

ENG 344. Late Nineteenth Century American Literature **Credits: 3.00**

ENG 352. The American Novel to 1914 **Credits: 3.00**

ENG 363. Native American Literature **Credits: 3.00**

ENG 401. Advanced Studies in Medieval Literature **Credits: 3.00**

ENG 402. Advanced Studies in British Literature Before 1700 **Credits: 3.00**

Additional Information

In addition to the General Education and academic major requirements, English majors desiring secondary education English teacher licensure must choose one of the following pathways:

1. English major, secondary education (SEED) major, admission to COE teacher education program and completion of program requirements, and fulfillment of the English teacher licensure requirements; or
2. English major, secondary education (SEED) minor, admission to COE teacher education program and completion of program requirements, fulfillment of English teacher licensure requirements, and completion of the graduate level Master of Arts in Teaching degree.

It is critical that students seeking licensure consult regularly with both their education adviser and their major adviser to support their progression through the programs. For a full description of the program in secondary teaching, refer to the Department of Middle, Secondary and Mathematics Education, in addition to the College of Education.

English Minor

Minor Requirements

The minimum requirement for a minor in English is 18 credit hours. At least nine hours must be taken in courses at the 300 level or above. A minor in English does not meet requirements for the Secondary Teaching License.

Department of Finance and Business Law

Hui Sono, **Department Head**

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Location: Zane Showker Hall, Room 3138

Website: www.jmu.edu/cob/finance

Professors

J. Chowdhury, J. Fink, K. Fink, Q. Liu, E. Semaan, H. Sono

Associate Professors

C. Larsson, C. Ullrich

Assistant Professors

C. Fox, E. McCarthy, X. Niu, A. Usman, W. Zhang

Lecturers

W. Collier, E. Ozcan, D. Parker, R. Rubin

Mission

The Department of Finance and Business Law, together with our partners in the business community, is committed to preparing students to be principled, productive contributors to business and society.

Values

To support its mission, the Department of Finance and Business Law is committed to the following values:

Ethics: Develop decision makers who are respectful of stakeholders and the rule of law.

Engagement: Connect students and faculty with stakeholders in the local and global communities.

Critical Thinking: Foster intellectual curiosity and analytical skills to enable an understanding of the role of finance and business law in the global economy.

Innovation: Challenge students to develop their own solutions to financial issues in a dynamic economy.

Career Opportunities

The finance major is designed to prepare students for careers in the financial management of industrial and commercial enterprises; commercial, retail and mortgage banking; investment analysis and portfolio management; real estate; insurance; finance positions in federal, state and local governments; and graduate study. The quantitative finance major prepares students for careers in risk analytics, investment banking, trading, risk management, financial engineering, and many other finance positions which require applied mathematics and computational skills.

Job titles held by graduates of the programs include:

Analyst, Structured Finance
Assistant Treasurer
Business Systems Analyst
Consultant
Consultant/Financial Advisory
Corporate Model Analyst
Credit Risk Associate
Financial Advisor
Financial Analyst
Financial Engineer
Internal Auditor
Junior Analyst
Lending Officer
Loan Analyst
Manager, Capital Budgeting
Manager, Pension Fund Investments
Manager, Project Finance
Market Analyst
Operations Analyst
Portfolio Analyst
Pricing Analyst
REIT Analyst
Risk Analytics Associate
Securities Research Analyst
Valuation Services Associate
Quantitative Research Analyst

Co-curricular Activities and Organizations

Financial Management Association Student Chapter
Madison Investment Fund
Madison Venture Group
Women In Business

Degree and Major Requirements

The Department of Finance and Business Law offers programs leading to the Bachelor of Business Administration degree in finance and the Bachelor of Science degree in quantitative finance. As part of the JMU assessment program, graduating seniors are required to participate in assessment activities. Assessment information is used to assist the College of Business and department faculty in curricula.

Finance, B.B.A.

Program Description

The B.B.A. degree with a major in finance requires a minimum of 120 credit hours of undergraduate course work. Students enrolled at James Madison University who wish to change their major to finance should go to the Student Center in MyMadison to submit a request. Students must be in good academic standing to change their major to finance and, if they have taken any FIN prefix courses at the time of the change request, must meet the prerequisites for the required courses in the finance major.

Students enrolled at James Madison University who wish to change their major to finance should go to the Student Center in MyMadison to submit a request. Students must be in good academic standing to change their major to finance and, if they have taken any FIN prefix courses at the time of the change request, must meet the prerequisites for the required courses in the finance major.

Students who plan to major in finance and earn a score on the Math Placement Exam sufficient for placement into MATH 235 are strongly encouraged to enroll in MATH 235.

Required major courses provide finance majors with a foundation in financial management, investments and institutions. Electives within the major permit students to obtain an additional emphasis and explore other areas within the field of finance.

Transfer Credit

Each program in the CoB will accept no more than two courses of transfer credit toward the major except in extraordinary circumstances. The major is defined as the course work required by a major field of study in addition to the lower and upper-level BBA core courses. For a course to be considered for acceptance in the student's major, it must have been completed in an AACSB International-accredited business program, or a similarly accredited program, at a four-year university.

In general, all finance course work must be completed at JMU. Transfer credit for finance courses is awarded only in certain circumstances. In no case will transfer credit be awarded for FIN 488. Contact the department head for more information on transfer credit.

Admission and Retention Requirements

College of Business Progression Standards
Any student admitted to JMU can declare any major offered by the College of Business. However, students must make satisfactory progress in order to be formally admitted into the College of Business. Requirements to continue pursuing a B.B.A. degree, often referred to as progression standards or formal admission, can be found on the College of Business catalog page.

Degree and Major Requirements

Degree Requirements	Credit Hours
B.B.A. core courses ¹	45-46
Finance major requirements	24
General Education courses <i>41 Credit Hours</i> ²	41
Electives	9-10
Total	120

Footnotes

¹ Up to seven hours of core requirements in economics and calculus may also be taken for General Education credit.
² The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

Major Requirements

Finance Major Core Courses

- FIN 360. Analytical Methods in Finance **Credits: 3.00**
- FIN 365. Intermediate Financial Management **Credits: 3.00**
- FIN 371. Principles of Investments **Credits: 3.00**
- FIN 488. Advanced Financial Policy **Credits: 3.00**

Additional Information

In addition to these core courses, the student majoring in finance must successfully complete 12 credit hours of finance elective courses. Finance electives include any 300-level or 400-level finance course other than FIN 301, FIN 345 and the finance major core courses.

A student may choose up to one of the following courses to satisfy the finance elective credit hours: ACTG 313, ACTG 343, ACTG 344, ACTG 377, BLAW 360, BLAW 470, BLAW 480, BLAW 494, BLAW 495, BLAW 496, BLAW 497, BLAW 498, CIS 304, CIS 330, CIS 393, CIS 463 and BSAN 393. A finance major cannot take more than 10 credit hours of FIN prefix courses in any one semester. In addition, three credits of FIN 499 (FIN 499A/FIN 499B/FIN 499C) will count toward the finance electives.

B.B.A. Core Component

B.B.A. Lower-Level Core Component

B.B.A. majors must complete all of the B.B.A. core components as part of their degree program. The following courses comprise the B.B.A. Lower-Level Core Component:

- COB 191. Business Analytics I **Credits: 3.00** ¹
- COB 202. Interpersonal Skills **Credits: 3.00**
- COB 204. Computer Information Systems **Credits: 3.00**
- COB 241. Financial Accounting **Credits: 3.00**

COB 242. Managerial Accounting **Credits: 3.00** ^{4,5}
COB 291. Business Analytics II **Credits: 3.00** ²
ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**
ECON 201. Introduction to Microeconomics **Credits: 3.00**

MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00** ³
or
MATH 235. Calculus I [C3QR] **Credits: 4.00** ³

B.B.A. Upper-Level Core Component

The following courses comprise the B.B.A. Upper-Level Core Component:

COB 300A. Integrative Business: Management **Credits: 3.00** ^{5,6}
COB 300B. Integrative Business: Finance **Credits: 3.00** ^{5,6}
COB 300C. Integrative Business: Operations **Credits: 3.00** ^{5,6}
COB 300D. Integrative Business: Marketing **Credits: 3.00** ^{5,6}
COB 318. Legal and Ethical Environment of Business **Credits: 3.00** ⁷
COB 487. Strategic Management **Credits: 3.00** ⁸

Footnotes

¹ MATH 220 may be substituted for COB 191.

² COB 191 or equivalent and MATH 205 or equivalent are prerequisites for COB 291.

³ Calculus is required but not used in calculating the B.B.A. core GPA. Students may substitute MATH 231, MATH 233 or ISAT 151 to fulfill the calculus requirement. MATH 235 is preferred for Economics and Finance majors.

⁴ COB 241 must be taken before COB 242.

⁵ COB 242 is a prerequisite for COB 300 but is not used in calculating the B.B.A. core GPA.

⁶ All four COB 300 courses must be taken during the same semester.

⁷ COB 300 is a prerequisite or corequisite for COB 318. COB 318 is a prerequisite for COB 487 and BLAW 497.

⁸ COB 487 must be taken during the senior year.

Concentrations

Though not required, finance majors may elect a concentration. The concentrations are financial analysis, financial technology and analytics, and risk management. Students electing these concentrations will be taking specific electives in place of the required four electives for the major. Finance majors who wish to declare a concentration may do so once accepted into COB 300 or during any semester following. A student must earn a 2.0 in the courses designated for a concentration in order to have successfully completed the concentration.

Financial Analysis Concentration

Many James Madison University finance graduates go on to careers in financial analysis, and the need for financial analysts remains strong. The financial analysis concentration helps prepare students for these careers and also Levels I and II of the Chartered Financial Analyst exam.

Students wishing to declare and complete the financial analysis concentration must have a minimum grade of "C" in COB 241 and COB 242.

Required Courses

FIN 362. Financial Analysis **Credits: 3.00**
FIN 378. Fixed Income Analysis **Credits: 3.00**
FIN 380. Elemental and Derivative Securities Analysis **Credits: 3.00**

Choose one of the following: 3 Credit Hours

ACTG 343. Corporate Financial Reporting I **Credits: 3.00**
FIN 420. Financial Planning and Wealth Management **Credits: 3.00**
FIN 434. Fundamentals of Financial Data Science **Credits: 3.00**
FIN 455. Advanced International Financial Management **Credits: 3.00**
FIN 475. Financial Modeling and Risk Analysis **Credits: 3.00**

Total: 12 Credit Hours

Financial Technology and Analytics Concentration

The changing landscape of finance requires increased knowledge of technology. The financial technology and analytics concentration will prepare the students to be agile in financial information systems and expose them to various analytical and visualization tools.

Required Courses

FIN 434. Fundamentals of Financial Data Science **Credits: 3.00**
FIN 471. Portfolio Management **Credits: 3.00**
FIN 475. Financial Modeling and Risk Analysis **Credits: 3.00**

Choose one of the following: 3 Credit Hours

BSAN 393. Data Mining for Business Analytics **Credits: 3.00**
CS 149. Introduction to Programming **Credits: 3.00**
CIS 304. Enterprise Architecture **Credits: 3.00**
CIS 330. Database Design and Application **Credits: 3.00**
CIS 393. Data Mining for Business Analytics **Credits: 3.00**

Total: 12 Credit Hours

Risk Management Concentration

A focus in risk management is designed for finance majors pursuing a more in-depth review of the issues facing organizations and the tools needed to address those uncertainties. In the risk management concentration, students focus on the theory of risk management, risk identification, risk measurement and applications in the form of risk modeling techniques such as Value-at-Risk and Monte Carlo simulations.

Required Courses

FIN 380. Elemental and Derivative Securities Analysis **Credits: 3.00**
FIN 450. Financial Risk Management **Credits: 3.00**

FIN 451. Risk Management II **Credits: 3.00**

FIN 475. Financial Modeling and Risk Analysis **Credits: 3.00**

Total: 12 Credit Hours

Recommended Schedule for Majors

First Two Years

Students planning to major in finance must complete the 30-31 hour, lower-division B.B.A. core curriculum prior to enrolling in upper-division core courses, normally taken in the first semester of the junior year. It is expected that the lower-division core curriculum will be completed during the first two years of study along with most of the university General Education curriculum. Failing to complete all lower-division B.B.A. core requirements on time will delay enrollment in upper-division core and major courses.

Third and Fourth Years

Finance majors will follow the course schedule below to complete the final two years of their program. It is possible to deviate from this program, but care must be taken to ensure that all course prerequisites are met. Finance majors are encouraged to enroll in FIN 360 during the same semester as COB 300 or during the semester following completion of COB 300. Note that students taking FIN 360 concurrently with COB 300 will have more choices in finance electives in subsequent semesters because FIN 360 is a prerequisite for most finance courses. It is anticipated that students will complete the finance requirements in three semesters following COB 300.

Third Year

First Semester

COB 300A. Integrative Business: Management **Credits: 3.00**

COB 300B. Integrative Business: Finance **Credits: 3.00**

COB 300C. Integrative Business: Operations **Credits: 3.00**

COB 300D. Integrative Business: Marketing **Credits: 3.00**

FIN 360. Analytical Methods in Finance **Credits: 3.00**

Second Semester

FIN 365. Intermediate Financial Management **Credits: 3.00**

FIN 371. Principles of Investments **Credits: 3.00**

Finance elective **Credits: 3.00**

Fourth Year

COB 487 is required during a student's senior year but may be taken either semester.

First Semester

Finance electives **Credits: 6.00**

Second Semester

COB 487. Strategic Management **Credits: 3.00**

FIN 488. Advanced Financial Policy **Credits: 3.00**

Finance elective **Credits: 3.00**

Program Total: 120 Credit Hours

Quantitative Finance/Mathematics Double Major, B.S.

Admission and Retention Requirements

College of Business Progression Standards

Any student admitted to JMU can declare any major offered by the College of Business. However, students must make satisfactory progress in order to be formally admitted into the College of Business. Requirements to continue pursuing a B.B.A. degree, often referred to as progression standards or formal admission, can be found on the College of Business catalog page.

Program Description

Bachelor of Science in Quantitative Finance

The B.S. degree with a major in quantitative finance is designed to prepare students for careers in financial engineering, structured finance, financial modeling, securitization, actuarial science, financial analysis and portfolio management. The quantitative finance major is classified as a STEM program. The focus of this major is on problem solving in the quantitative areas of finance with an added emphasis on the application of complex securities to a variety of financial situations.

The quantitative finance program, which is a cross disciplinary major with many courses co-listed with the math department, is a highly structured program requiring minor fields in both mathematics and economics, though many students choose to double major in mathematics and quantitative finance. If the double major is selected, students are required to take ECON 200, ECON 201, and ECON 331, but are not required to complete the economics minor. Students electing this program should consult with their major adviser as early as possible to identify the appropriate course sequencing. Students electing to double major in mathematics and quantitative finance should also consult with a mathematics adviser as soon as possible.

Students enrolled in James Madison University who wish to change their major to quantitative finance should go to the Student Center in MyMadison to submit a request. Students must be in good academic standing to change their major to quantitative finance and, if they have taken any FIN prefix courses at the time of the change request, must meet the prerequisites for the required courses in the quantitative finance major.

Transfer Credit

Each program in the CoB will accept no more than two courses of transfer credit toward the major except in extraordinary circumstances. The major is defined as the course work required by a major field of study in addition to the lower and upper-level BBA core courses. For a course to be considered for acceptance in the student's major, it must have been completed in an AACSB International-accredited business program, or a similarly accredited program, at a four-year university.

In general, all finance course work must be completed at JMU. Transfer credit for finance courses is awarded only in certain circumstances. In no case will transfer credit be awarded for FIN 480. Contact the department head for more information on transfer credit.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Scientific Literacy requirement ²	3
Free electives	0-1
	75-76
Major requirements (listed below) and electives	
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.
² In addition to course work taken to fulfill General Education requirement.

Major Requirements

COB 241. Financial Accounting **Credits: 3.00**

Finance Courses: 27 Credit Hours

FIN 250. Introduction to Quantitative Finance **Credits: 3.00**
FIN 365. Intermediate Financial Management **Credits: 3.00**
FIN 371. Principles of Investments **Credits: 3.00**
FIN 380. Elemental and Derivative Securities Analysis **Credits: 3.00**
FIN 395. Mathematical Finance **Credits: 3.00**
or
MATH 395. Mathematical Finance **Credits: 3.00**
FIN 405. Securities Pricing **Credits: 3.00**
or
MATH 405. Securities Pricing **Credits: 3.00**
FIN 450. Financial Risk Management **Credits: 3.00**
FIN 480. Seminar in Quantitative Finance Research and Data Analysis **Credits: 3.00**

Plus one of the following:

FIN 328. Time Series Analysis **Credits: 3.00**
MATH 328. Time Series Analysis **Credits: 3.00**
FIN 372. International Finance and Payments **Credits: 3.00**
ECON 372. International Finance and Payments **Credits: 3.00**
FIN 451. Risk Management II **Credits: 3.00**
FIN 455. Advanced International Financial Management **Credits: 3.00**
FIN 471. Portfolio Management **Credits: 3.00**
FIN 475. Financial Modeling and Risk Analysis **Credits: 3.00**

Economics Courses: 9 Credit Hours

(Three of which count for General Education and three of which count for the B.S. scientific literacy requirement)

ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**
ECON 201. Introduction to Microeconomics **Credits: 3.00**
ECON 331. Intermediate Microeconomic Theory **Credits: 3.00**

Mathematics Courses: 42-43 Credit Hours

(Four of which count for General Education)

MATH 235. Calculus I [C3QR] **Credits: 4.00**
MATH 236. Calculus II **Credits: 4.00**
MATH 237. Calculus III **Credits: 4.00**
MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**
MATH 245. Discrete Mathematics **Credits: 3.00**
MATH 248. Computers and Numerical Algorithms **Credits: 4.00**
MATH 318. Introduction to Probability and Statistics **Credits: 4.00**
MATH 410. Advanced Calculus I **Credits: 3.00**
MATH 430. Abstract Algebra I **Credits: 3.00**

One of the following mathematics electives:

MATH 411. Advanced Calculus II **Credits: 3.00**
MATH 431. Abstract Algebra II **Credits: 3.00**
MATH 434. Advanced Linear Algebra **Credits: 3.00**
MATH 435. Introduction to Topology **Credits: 3.00**

One of the following recommended mathematics electives:

MATH 322. Applied Linear Regression **Credits: 3.00**
MATH 423. Stochastic Process **Credits: 3.00**
MATH 424. Statistical Decision Theory **Credits: 3.00**
MATH 426. Probability and Mathematical Statistics I **Credits: 3.00**
MATH 440. Fourier Analysis and Partial Differential Equations **Credits: 3.00**

Footnotes

¹ General Education requirement Cluster Three.
² General Education requirement Cluster Four.
³ Satisfies the scientific literacy requirement.

Total: 81-82 Credit Hours

Concentrations

Though not required, Quantitative Finance majors may elect a concentration. The concentrations are financial analysis and risk management. Students electing these concentrations will be taking specific FIN electives.

Financial Analysis Concentration

The financial analysis concentration helps prepare students for careers as financial analysts and also Levels I and II of the Chartered Financial Analyst (CFA) exam.

Required Courses

FIN 362. Financial Analysis **Credits: 3.00**

FIN 378. Fixed Income Analysis **Credits: 3.00**

FIN 380. Elemental and Derivative Securities Analysis **Credits: 3.00**

Choose one of the following: 3 Credit Hours

ACTG 343. Corporate Financial Reporting I **Credits: 3.00**

FIN 475. Financial Modeling and Risk Analysis **Credits: 3.00**

FIN 434. Fundamentals of Financial Data Science **Credits: 3.00**

FIN 420. Financial Planning and Wealth Management **Credits: 3.00**

FIN 455. Advanced International Financial Management **Credits: 3.00**

Total : 12 Credit Hours

Risk Management Concentration

Though not required, quantitative finance majors may elect the risk management concentration. Students electing this concentration will be taking specific electives and two additional electives. Students may add this concentration to their program when they progress to FIN 380 .

Quantitative finance majors who wish to declare the risk management concentration may do so after successfully completing FIN 250 or any semester following.

A focus in risk management is designed for qualitative finance majors pursuing a more in-depth review of the issues facing organizations and the tools needed to address those uncertainties. In the risk management concentration, students focus on the theory of risk management, risk identification, risk measurement and applications in the form of risk modeling techniques such as Value-at-Risk and Monte Carlo simulations.

Required Courses

FIN 380. Elemental and Derivative Securities Analysis **Credits: 3.00**

FIN 450. Financial Risk Management **Credits: 3.00**

FIN 451. Risk Management II **Credits: 3.00**

FIN 475. Financial Modeling and Risk Analysis **Credits: 3.00**

Recommended Schedule for Majors

Program Total: 120 Credit Hours

Quantitative Finance Major with a Minor in Economics and Mathematics, B.S.

Program Description

Bachelor of Science in Quantitative Finance

The B.S. degree with a major in quantitative finance is designed to prepare students for careers in financial engineering, structured finance, financial modeling, securitization, actuarial science, financial analysis and portfolio management. The quantitative finance major is classified as a STEM program. The focus of this major is on problem solving in the quantitative areas of finance with an added emphasis on the application of complex securities to a variety of financial situations.

The quantitative finance program, which is a cross disciplinary major with many courses co-listed with the Department of Mathematics and Statistics, is a highly structured program requiring minor fields in both mathematics and economics, though many students choose to double major in mathematics and quantitative finance. If the double major is selected, students are required to take ECON 200, ECON 201 and ECON 331, but are not required to complete the economics minor. Students electing this program should consult with their major adviser as early as possible to identify the appropriate course sequencing. Students electing to double major in mathematics and quantitative finance should also consult with a mathematics adviser as soon as possible.

Students enrolled in James Madison University who wish to change their major to quantitative finance should go to the Student Center in MyMadison to submit a request. Students must be in good academic standing to change their major to quantitative finance and, if they have taken any FIN prefix courses at the time of the change request, must meet the prerequisites for the required courses in the quantitative finance major.

Transfer Credit

Each program in the CoB will accept no more than two courses of transfer credit toward the major except in extraordinary circumstances. The major is defined as the course work required by a major field of study in addition to the lower and upper-level BBA core courses. For a course to be considered for acceptance in the student's major, it must have been completed in an AACSB International-accredited business program, or a similarly accredited program, at a four-year university.

In general, all finance course work must be completed at JMU. Transfer credit for finance courses is awarded only in certain circumstances. In no case will transfer credit be awarded for FIN 480. Contact the department head for more information on transfer credit.

Admission and Retention Requirements

College of Business Progression Standards

Any student admitted to JMU can declare any major offered by the College of Business. However, students must make satisfactory progress in order to be formally admitted into the College of Business. Requirements to continue pursuing a B.B.A. degree, often referred to as progression standards or formal admission, can be found on the College of Business catalog page.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Scientific Literacy requirement ²	3
Electives	11
Major requirements (listed below)	65
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² In addition to course work taken to fulfill General Education requirement.

Major Requirements

COB 241. Financial Accounting **Credits: 3.00**

Finance Courses: 27 Credit Hours

FIN 250. Introduction to Quantitative Finance **Credits: 3.00**

FIN 365. Intermediate Financial Management **Credits: 3.00**

FIN 371. Principles of Investments **Credits: 3.00**

FIN 380. Elemental and Derivative Securities Analysis **Credits: 3.00**

FIN 395. Mathematical Finance **Credits: 3.00**

or

MATH 395. Mathematical Finance **Credits: 3.00**

FIN 405. Securities Pricing **Credits: 3.00**

or

MATH 405. Securities Pricing **Credits: 3.00**

FIN 450. Financial Risk Management **Credits: 3.00**

FIN 480. Seminar in Quantitative Finance Research and Data Analysis **Credits: 3.00**

Plus one of the following:

FIN 328. Time Series Analysis **Credits: 3.00**

or

MATH 328. Time Series Analysis **Credits: 3.00**

FIN 372. International Finance and Payments **Credits: 3.00**

or

ECON 372. International Finance and Payments **Credits: 3.00**

FIN 451. Risk Management II **Credits: 3.00**

FIN 455. Advanced International Financial Management **Credits: 3.00**

FIN 471. Portfolio Management **Credits: 3.00**

FIN 475. Financial Modeling and Risk Analysis **Credits: 3.00**

Mathematics Courses: 27 Credit Hours

(Four of the 27 credits count for General Education)

MATH 235. Calculus I [C3QR] **Credits: 4.00** ¹

MATH 236. Calculus II **Credits: 4.00**

MATH 237. Calculus III **Credits: 4.00**

MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**

MATH 248. Computers and Numerical Algorithms **Credits: 4.00**

MATH 318. Introduction to Probability and Statistics **Credits: 4.00**

One of the following recommended MATH electives:

MATH 423. Stochastic Process **Credits: 3.00**

MATH 424. Statistical Decision Theory **Credits: 3.00**

MATH 426. Probability and Mathematical Statistics I **Credits: 3.00**

MATH 440. Fourier Analysis and Partial Differential Equations **Credits: 3.00**

Economics Courses: 18 Credit Hours

(Six of the 18 credits count for General Education)

ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00** ²

ECON 201. Introduction to Microeconomics **Credits: 3.00** ³

ECON 331. Intermediate Microeconomic Theory **Credits: 3.00**

ECON 332. Intermediate Macroeconomic Theory **Credits: 3.00**

and

MATH 322. Applied Linear Regression **Credits: 3.00**

or

ECON 385. Econometrics **Credits: 3.00**

One upper-level economics elective *3 Credit Hours*

Total: 75 Credit Hours

Footnotes

¹ General Education requirement Cluster Three .

² General Education requirement Cluster Four.

³ Satisfies the scientific literacy requirement.

Concentrations

Though not required, Quantitative Finance majors may elect a concentration.

The concentrations are financial analysis and risk management. Students electing these concentrations will be taking specific FIN electives.

Financial Analysis Concentration

The financial analysis concentration helps prepare students for careers as financial analysts and also Levels I and II of the Chartered Financial Analyst (CFA) exam.

Required Courses

FIN 362. Financial Analysis **Credits: 3.00**

FIN 378. Fixed Income Analysis **Credits: 3.00**

FIN 380. Elemental and Derivative Securities Analysis **Credits: 3.00**

Choose one of the following: 3 Credit Hours

ACTG 343. Corporate Financial Reporting I **Credits: 3.00**

FIN 434. Fundamentals of Financial Data Science **Credits: 3.00**

FIN 475. Financial Modeling and Risk Analysis **Credits: 3.00**

FIN 420. Financial Planning and Wealth Management **Credits: 3.00**

FIN 455. Advanced International Financial Management **Credits: 3.00**

Total: 12 Credit Hours

Risk Management Concentration

Though not required, quantitative finance majors may elect the risk management concentration. Students electing this concentration will be taking specific electives and two additional electives. Students may add this concentration to their program when they progress to FIN 380 .

Quantitative finance majors who wish to declare the risk management concentration may do so after successfully completing FIN 250 or any semester following.

A focus in risk management is designed for qualitative finance majors pursuing a more in-depth review of the issues facing organizations and the tools needed to address those uncertainties. In the risk management concentration, students focus on the theory of risk management, risk identification, risk measurement and applications in the form of risk modeling techniques such as Value-at-Risk and Monte Carlo simulations.

Required Courses

FIN 380. Elemental and Derivative Securities Analysis **Credits: 3.00**

FIN 450. Financial Risk Management **Credits: 3.00**

FIN 451. Risk Management II **Credits: 3.00**

FIN 475. Financial Modeling and Risk Analysis **Credits: 3.00**

Total: 12 Credit Hours

Additional Information

FIN 450 is a requirement for quantitative finance majors and FIN 451 and FIN 475 are possible electives for this major. Students electing this concentration take two courses beyond the typical quantitative finance major.

Program Total: 120 Credit Hours

Department of Foreign Languages, Literatures and Cultures

José Ignacio Barrio Olano, **Interim Department Head**

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Location: Keezell Hall, Room 301

Website: <http://www.jmu.edu/forlang>

Professors

J. I. Barrio Olano, P. Eubanks, T. Regalado López

Associate Professors

G. Cardillo, D. Galarreta-Aima, J. Lang-Rigal, M. Mason, Y. Montes de Oca, D. Polanz, A. Shahin, H. Yanacek

Assistant Professors

V. Dávila Ellis, A. Saidou

Lecturers

L. Cangiano, V. Haun, K. Kline-Gabel, J. Tkac, B. Warden

Instructors

E.J. Calleja, D. Campora, M. Fiorello, I. Haseloff, S. Hernández, H. Moreira, M. Munier, V. Riso

Mission

The Department of Foreign Languages, Literatures and Cultures (FLLC) is a central site on campus for the implementation of James Madison University's internationalization efforts. Through its course offerings, study abroad programs, organizations and clubs, and the presence of faculty with research areas in diverse foreign cultures, the department embodies cultural diversity, particularly international diversity, at JMU. The strong presence of international students and faculty on campus is a critical indicator of this recognition of international diversity.

The Department of Foreign Languages, Literatures and Cultures offers students and the community a broad range of educational courses and programs that help develop foreign language competence, a global perspective, and an understanding of foreign cultures both ancient and modern.

The department's mission is to ensure that all graduates with a B.A. have sufficient knowledge of a modern foreign language to build fluency in that language when future personal or professional needs require it; prepare language majors for success as professionals in language-related career fields; enhance the education of non-language majors by providing them foreign language skills that complement their chosen major; teach understanding and appreciation of foreign cultures and provide basic knowledge about the

literature, culture and intellectual achievements of countries other than the U.S.; play a leading role in internationalizing the college curriculum; provide opportunities for language and cultural study abroad; and support cross-listed courses for the departments of English and history as part of their major requirements and in the General Education program with courses for the Cluster Two requirements.

The department also plays an important role in the university cross-disciplinary minors by offering courses for Asian Studies Minor, Medieval and Renaissance Studies Minor, Middle Eastern Communities and Migrations Minor, Modern European Studies Minor, Russian Studies, Latin American, Latinx and Caribbean Studies Minor, World Literature and Classical Studies.

Goals and Objectives

The department strives to fulfill this mission by pursuing the following goals. Within each area, students should:

Knowledge

Be familiar with a variety of linguistic principles in both the target language and their own.

Understand the major literary movements of the target culture and be familiar with selected major literary texts of the target culture.

Be familiar with the great ideas of humanity, especially as they have originated in or influenced the target culture.

Understand the institutions and history of the target culture.

Understand similarities and differences between the target culture and their own.

Skills

Demonstrate reading, writing, listening and speaking skills in both English and the target language.

Think critically, analytically and objectively.

Make and formulate informed aesthetic and linguistic judgments.

Research a topic thoroughly using both traditional and online sources.

Use computers effectively for a variety of purposes, from word processors and spell checkers in the target language to terminological databases and machine-aided translation tools.

Experiences

Ponder what it means to be human in response to literary and cultural studies.

Engage great texts and great ideas.

Realize what it is like to be a foreigner with incomplete cultural and linguistic competence.

See the world through the filter of another language and culture.

Realize that every language is an imperfect vehicle, riddled with traps and ambiguities.

Attitudes

Embrace life-long learning.

Approach issues from cross disciplinary, global and historical perspectives.

Respect diversity among cultures and within any given culture.

Respect the opinions and beliefs of other people – and other peoples – while defining and advancing their own.

Recognize the contingent nature of knowledge.

Program

The department offerings address a wide spectrum of student needs. Our program seeks to:

Offer a minor and a major in a specific language.

Strongly recommend a second major and/or minor in another discipline.

Offer advanced courses for cross disciplinary programs.

Offer basic courses required for Bachelor of Arts candidates.

Organize and participate in Honors courses.

Provide General Education courses in Cluster Two and reinforce Cluster One goals in all courses.

Faculty

The faculty members of the department strive to:

Meet the ever-evolving needs of the students.

Develop innovative teaching techniques, courses and programs while preserving a traditional core.

Engage consistently in scholarship.

Provide dutiful service to the college, the university and the profession.

Be a role model for students as educators and as human beings.

General Objectives

All language majors are expected to acquire:

Knowledge of critical thinking methods and the ability to apply them.

Know-how with regard to computers, including word processing skills and the ability to use software devoted to grammar exercises, vocabulary development, literature and culture.

An appreciation and affective feel for other cultures in addition to an intellectual perspective.

Specific Objectives

The Foreign Languages, Literatures and Cultures offers programs designed to:

Teach students to understand and speak a language with relative ease.

Develop skills in reading and writing.

Provide an acquaintance with foreign literatures.

Develop an appreciation of foreign cultures.

Prepare students for professions in education, government work and international trade or for research leading to advanced degrees.

Career Opportunities

Banking

Criminal Justice

Education

Foreign Service

Imports/Exports

Law

Management

Marketing

Medicine

Ministry

Museum work

Public Relations

Social work

Translation

Co-curricular Organizations

The department supports the following organizations:

Dobro Slovo
German Club
Il Circolo Culturale Italiano
Phi Sigma Iota
Russian Club
El Club de Español
Sigma Delta Pi

International Education and Studies Abroad

The department strongly supports – and greatly benefits from – the university's excellent studies abroad programs. Majors are strongly encouraged to spend a significant amount of time abroad and teaching licensure candidates must either spend a semester abroad and/or demonstrate an advanced level of foreign language proficiency. Students are urged to check with their language advisers to see which courses taken abroad count toward the language major. Majors in modern foreign languages must take 33 credit hours of foreign language courses specified by the department. Students are required to take 18 of those in courses taught in the Department of Foreign Languages, Literatures and Cultures based on the main JMU campus.

Minors in modern foreign languages must take 18 credit hours of foreign language courses specified by the department. Students are required to take nine of those in courses taught in the Department of Foreign Languages, Literatures and Cultures based on the main JMU campus.

Placement Tests

The score a student receives from the online placement test will be valid for registering in a language class that takes place up to and including the second semester of the sophomore year at JMU. A student who chooses to wait until his/her junior year to begin language study will be required to repeat the online placement test. Students will be placed in a class according to the new score, even if this means starting in a lower-level class than was indicated by the first placement test. In this circumstance, the student will take more classes to fulfill the language requirement for the B.A. degree.

The faculty of the Department of Foreign Languages, Literatures and Cultures strongly recommend that students begin their required language classes no later than the second semester of the sophomore year, and ideally as soon as possible after taking the online placement exam.

Semester Registering	Accepted Placement Score
Fall, first year	First year test
Spring, first year	First year test
Fall, sophomore year	First year test
Spring, sophomore year	First year test
Fall, junior year (and all later semesters)	Must retake test in spring of sophomore year or later in order to

	register for language classes for this semester and all later semesters
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Heritage Speakers and International Students

Heritage speakers who would like to pursue a major or minor in FLLC studies in their heritage language must take the JMU Foreign Language placement test. Placement into level 300 is required in order to qualify to take the examination for credit for 300. Students who pass the examination for credit for 300 are entitled to register in other FLLC courses that have 300 as a prerequisite or to proceed to take the examination for credit for 320.

International students who are admitted to JMU and would like to pursue a major or minor in FLLC studies in their native language(s) need to take the examination for credit for 300 and 320 and then register for more advanced courses.

Heritage speakers and international students who need to satisfy a language requirement need to complete a waiver form after being tested for proficiency.

Heritage speakers and international students who wish to take elective credits in their language need to be tested for proficiency.

For testing of languages not offered by FLLC department, contact the department.

Modern Foreign Languages, B.A.

Program Description

Bachelor of Arts in Modern Foreign Languages

Students can earn both a B.A. in Modern Foreign Languages and a minor in a specific language. Currently the department provides:

- Four years of instruction in Arabic, French, German, Italian and Spanish.
 - Three years of instruction in Chinese and Japanese.
 - Two years of instruction in Ancient Greek, Latin, Korean, Persian, Portuguese, Russian and Swahili.
- The minimum requirement for a major in languages is 33 upper-division credit hours in a specific language.

Additional Language

- Students majoring in modern foreign languages must complete the intermediate level of a second language unless they are:
- Completing a second major.
 - Completing a teaching licensure or an education minor.
 - Completing two degrees.
 - Completing a pre-professional health program.
- If the student has a previous background in a second language, the second language requirement may also be satisfied by placing out of it through the Department of Foreign Languages, Literatures and Cultures' placement test.

However, in this case, the student must proportionally increase the number of university electives as indicated in the B.A. degree requirements.

Minimum Grades

A student must receive a minimum grade of "C-" for course credits to count toward any major or minor in the Department of FLLC.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign language classes (intermediate level required) ²	0-14
Second Foreign Language (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
University electives ³	15-43
Major requirements (listed below)	33
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The foreign language requirement and the second language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures' placement test. The second language is not required of double majors or education minors or of those seeking teaching licensure.

³ The number of university electives varies depending on the number of actual credits earned with the first and second language requirements. These language requirements may be fully or partly satisfied through the Department of Foreign Languages, Literatures and Cultures' placement tests, but these tests do not confer actual credits and subsequently, the number of university electives students take will vary.

Major Requirements

All language sections share certain core requirements.

Courses

Two language courses (300 and 320 or 321) *6 Credit Hours* ¹

Two civilization courses (307 and 308) *6 Credit Hours*

Literature courses in the target language *6-12 Credit Hours*

Other courses as specified by the section *9-15 Credit Hours* ²

Total: 33 Credit Hours

Footnotes

¹ These courses fulfill the College of Arts and Letters writing-intensive requirement for the major.

² The courses required for Spanish majors are different, as shown in the Spanish listing.

Arabic

Courses

ARAB 300. Arabic Grammar and Communication **Credits: 3.00** ¹

ARAB 307. A History of Islamic Civilization 600-1600 A.D. **Credits: 3.00**

ARAB 308. Contemporary Islamic Civilization **Credits: 3.00**

ARAB 320. Arabic Oral and Written Communication **Credits: 3.00**

ARAB 371. Advanced Arabic Grammar and Translation **Credits: 3.00**

Two 300- or 400-level ARAB literature courses *Credits: 6.00*

Three other 300- or 400-level ARAB courses *Credits: 9.00*

Choose one of the following courses: 3 Credit Hours

ARAB 400. Advanced Arabic Writing and Conversation **Credits: 3.00**

ARAB 411. Colloquial Egyptian Arabic I **Credits: 3.00**

ARAB 412. Colloquial Egyptian Arabic II **Credits: 3.00**

ARAB 413. Colloquial Levantine Arabic I (Jordanian/Palestinian) **Credits: 3.00**

ARAB 414. Colloquial Levantine Arabic II (Syrian/Lebanese) **Credits: 3.00**

Total: 33 Credit Hours

Footnote

¹ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

French

Courses

FR 300. Grammar and Communication **Credits: 3.00** ¹

FR 307. History of French Culture and Society **Credits: 3.00**

FR 308. Contemporary History and Culture in the Francophone World **Credits: 3.00**

FR 320. French Oral and Written Communication **Credits: 3.00**

FR 335. Introduction to Francophone Literature **Credits: 3.00**

Three 300- or 400-level FR literature courses *Credits: 9.00*

Three other 300- or 400-level FR courses *Credits: 9.00*

Total: 33 Credit Hours

Footnote

¹ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

German

Courses

GER 300. Grammar and Communication **Credits: 3.00** ¹
GER 307. History of German Culture and Society **Credits: 3.00**
GER 308. Contemporary German Culture and Society **Credits: 3.00**
GER 320. Oral and Written Communication **Credits: 3.00**
GER 341. Translation Competencies **Credits: 3.00**
Three 300- or 400-level GER literature courses ² **Credits: 9.00**
Three elective 300- or 400-level GER courses ² **Credits: 9.00**

Total: 33 Credit Hours

Footnote

¹ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

² Up to two courses taught in English may be counted toward the total major unit requirement, with the approval of your adviser.

Italian

Courses

ITAL 300. Italian Grammar and Communication **Credits: 3.00** ¹
ITAL 307. History of Italian Culture and Society **Credits: 3.00**
ITAL 308. Contemporary Italian History and Culture **Credits: 3.00**
ITAL 320. Oral and Written Communication **Credits: 3.00**
ITAL 335. Introduction to Italian Literature **Credits: 3.00**
ITAL 435. Translation Strategies **Credits: 3.00**
Two 300- or 400-level ITAL literature courses² **Credits: 6.00**
Three elective 300- or 400-level ITAL courses² **Credits: 9.00**

Total: 33 Credit Hours

Footnote

¹ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

² Up to three courses taught in English may be counted toward the total major unit requirement, with the approval of your academic unit head.

Spanish

Courses

SPAN 300. Grammar and Communication **Credits: 3.00** ¹
SPAN 307. History of Spanish Culture and Society **Credits: 3.00**
SPAN 308. Latin American Cultures **Credits: 3.00**
SPAN 320. Oral and Written Communication **Credits: 3.00**
or
SPAN 321. Oral and Written Communication (for Heritage Speakers) **Credits: 3.00**
SPAN 335. Introduction to Hispanic Literature **Credits: 3.00**
Three SPAN literature courses **Credits: 9.00**
Three other 300- or 400-level SPAN courses **Credits: 9.00**

Total: 33 Credit Hours

Footnote

¹ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

Recommended Schedule for Majors

Students are encouraged to begin their FLLC course work as soon as possible in their degree plans. The following outline is a sample four-year program. The actual courses a student takes may vary.

First Year

Foreign language courses^{1,2} **Credits: 6.00-8.00**
General Education Madison Foundations **Credits: 9.00**
General Education courses and/or elective courses **Credits: 15.00**

First Year Total: 30-32 Credit Hours

Second Year

Foreign language courses **Credits: 6.00-12.00** ³
First year of second foreign language courses (if required) or other program courses **Credits: 6.00-8.00** ⁴
Philosophy course **Credits: 3.00**
General Education courses and/or elective courses **Credits: 6.00-15.00**

Second Year Total: 29-30 Credit Hours

Third Year

Foreign language 300- and 400-level courses **Credits: 12.00-15.00**
Second year of second foreign language courses (if needed) **Credits: 6.00**
General Education courses and/or other electives **Credits: 12.00-15.00**

Third Year Total: 30 Credit Hours

Fourth Year

Foreign language 300- and 400-level courses **Credits: 9.00-15.00**
Other electives **Credits: 15.00-20.00**

Fourth Year Total: 29-30 Credit Hours

Footnotes

¹ Depending on the level of the student and course availability, courses could be 101-102, 231-232, 300-320 or other appropriate sequence (e.g., 102-231). Majors starting with the 101-102 sequence in a language are strongly encouraged to take the 212 course of the language during the summer.

² Upper-level courses in the language or university electives may be substituted if a student places in higher-level language courses.

³ Depending on the level of the student and course availability, courses could be 231-232, 300-320, or other appropriate sequence or combination of upper-level course.

⁴ Completion of a second foreign language at the intermediate level is required unless the student is completing a second major, an education minor, two degrees or a pre-professional health program.

Program Total: 120 Credit Hours

Modern Foreign Languages Teaching Licensure

Interim Coordinator: José I. Barrio Olano

Phone: (540) 568-6128

Email: barrioji@jmu.edu

In conjunction with the College of Education, the department offers programs leading to the teaching license in French, German and Spanish. In addition to the General Education and academic major requirements, students desiring preK-12 teaching licensure in French, German or Spanish must be accepted for admission to the teacher education program offered by the College of Education prior to enrolling in professional education courses. In addition to the 33 foreign language credits, an additional 39 credits are required for teaching licensure.

Students interested in teacher licensure in French, German or Spanish must also meet the specific curriculum requirements of their foreign language major as part of the undergraduate academic degree.

For a complete description of admission and retention policies and procedures for teacher education, refer to the College of Education. Students seeking licensure are encouraged to consult regularly with the teaching licensure coordinator.

Required Courses

PSYC 160. Life Span Human Development [C5SD] **Credits:** 3.00 ¹

EDUC 200. Foundations of Education in the United States **Credits:** 3.00 ¹

EXED 303. Foundations of Classroom and Behavior Management **Credits:** 3.00

MSSE 370. General Instructional Methods for Grades 6-12 **Credits:** 3.00

MSSE 371. Clinical Experience in Adolescent Education **Credits:** 1.00

FLED 370. Modern Foreign Language Assessment **Credits:** 3.00

FLED 470. Methods of Modern Foreign Language Teaching **Credits:** 3.00

FLED 471. Modern Foreign Language Field Experience **Credits:** 3.00

FLED 475. Supervised Student Teaching Experience **Credits:** 12.00

FLED 476. Student Teaching Seminar **Credits:** 3.00

LED 420. Content Area Literacy, K-12 **Credits:** 2.00

Total: 39 Credit Hours

Footnote

¹ Minimum grade of "C" required in EDUC 200, PSYC 160 and WRTC 103.

Minimum Grades

A student must receive a minimum grade of "C-" for course credits to count toward any major or minor in the Department of FLLC.

Business French Minor

Courses

FR 300. Grammar and Communication **Credits:** 3.00

FR 308. Contemporary History and Culture in the Francophone World **Credits:** 3.00

FR 320. French Oral and Written Communication **Credits:** 3.00

FR 330. Business French **Credits:** 3.00

FR 375. Business and Society in the Francophone World **Credits:** 3.00

One 300 or 400-level FR course *Credits:* 3.00

Total: 18 Credit Hours

Minimum Grades

A student must receive a minimum grade of "C-" for course credits to count toward any major or minor in the Department of FLLC.

Business German Minor

Courses

GER 300. Grammar and Communication **Credits:** 3.00

GER 308. Contemporary German Culture and Society **Credits:** 3.00

GER 320. Oral and Written Communication **Credits:** 3.00

GER 330. Business German **Credits:** 3.00

GER 341. Translation Competencies **Credits:** 3.00

GER 375. Business and Society in Germany **Credits:** 3.00

Total: 18 Credit Hours

Minimum Grades

A student must receive a minimum grade of "C-" for course credits to count toward any major or minor in the Department of FLLC.

Business Italian Minor

Courses

Up to two courses in English may be counted toward the total minor requirement, with approval of the academic unit head.

ITAL 300. Italian Grammar and Communication **Credits: 3.00**
ITAL 308. Contemporary Italian History and Culture **Credits: 3.00**
ITAL 320. Oral and Written Communication **Credits: 3.00**
ITAL 330. Business Italian **Credits: 3.00**
ITAL 375. Business and Society in Italy **Credits: 3.00**
ITAL 435. Translation Strategies **Credits: 3.00**

Minimum Grades

A student must receive a minimum grade of "C-" for course credits to count toward any major or minor in the Department of FLLC.

Business Spanish Minor

Adviser: Veronica Haun
Phone: (540) 568-6851
Email: haunvx@jmu.edu

The professional minor in business Spanish is intended for students who wish to consolidate and improve their knowledge of Spanish in several business areas. The main aim of the minor is to teach students how to use specific business terms in Spanish and to handle selling techniques, negotiation strategies, product presentations, commercial activities, marketing and business correspondence in Spanish. Students acquire a greater knowledge of Spanish as well as deeper understanding of Spanish or Hispanic societies and their business cultures.

The minor comprises one linguistic component, one elective component, one translation/interpretation component and three profession-specific linguistic components.

Required Courses

SPAN 300. Grammar and Communication **Credits: 3.00**
SPAN 330. Business Spanish **Credits: 3.00**
SPAN 430. Advanced Business Spanish **Credits: 3.00** (*SPAN 430 offered only in spring semesters*)
SPAN 485. Business and Society in Latin America **Credits: 3.00** (*SPAN 485 offered only in fall semesters*)

Choose one: 3 Credit Hours

SPAN 435. Translation Strategies **Credits: 3.00**
SPAN 436. Introduction to Interpretation **Credits: 3.00**
SPAN 493. Business Spanish Internship **Credits: 3.00**

One elective Spanish course: 3 Credit Hours

SPAN 307. History of Spanish Culture and Society **Credits: 3.00**
SPAN 308. Latin American Cultures **Credits: 3.00**
SPAN 311. Contrastive Linguistics **Credits: 3.00**
SPAN 320. Oral and Written Communication **Credits: 3.00**
or
SPAN 321. Oral and Written Communication (for Heritage Speakers) **Credits: 3.00**
SPAN 407. Aspects of Contemporary Spanish Culture and Society **Credits: 3.00**
SPAN 447. Special Topics in Spanish Culture **Credits: 3.00**
SPAN 486. Business and Society in Spain **Credits: 3.00**

Total: 18 Credit Hours

Minimum Grades

A student must receive a minimum grade of "C-" for course credits to count toward any major or minor in the Department of FLLC.

Medical Spanish Minor

Diana Galarreta, **Adviser**
Phone: (540) 568-6128
Email: galarrdf@jmu.edu

For health service professionals, knowledge of medical Spanish is no longer an option but a necessity. Unless they have a reasonable level of Spanish, communication with patients whose only language is Spanish will be difficult. Courses in medical Spanish are therefore hugely relevant today. The minor in medical Spanish is intended for all future health service professionals, including physicians and their assistants, nurses, pharmacists, dentists, physical therapists, occupational therapists, medical laboratory technicians, emergency medical technicians, medical aides, medical interpreters, healthcare industry professionals and psychologists.

The minor comprises one linguistic component, one elective component, one translation/interpretation component and three profession-specific linguistic components.

Required Courses: 12 Credit Hours

SPAN 300. Grammar and Communication **Credits: 3.00**
SPAN 365. Spanish for Medical Professionals I **Credits: 3.00**
SPAN 375. Spanish for Medical Professionals II **Credits: 3.00**
SPAN 476. Culture and Medicine in Latin America **Credits: 3.00**
or
SPAN 478. Spanish for Medical Professionals III **Credits: 3.00**

One elective Spanish course: 3 Credit Hours

SPAN 307. History of Spanish Culture and Society **Credits: 3.00**
 SPAN 308. Latin American Cultures **Credits: 3.00**
 SPAN 320. Oral and Written Communication **Credits: 3.00**
 or
 SPAN 321. Oral and Written Communication (for Heritage Speakers) **Credits: 3.00**
 SPAN 407. Aspects of Contemporary Spanish Culture and Society **Credits: 3.00**
 SPAN 408. Aspects of Latin American Culture **Credits: 3.00**
 SPAN 447. Special Topics in Spanish Culture **Credits: 3.00**

Choose one: 3 Credit Hours

SPAN 435. Translation Strategies **Credits: 3.00**
 SPAN 436. Introduction to Interpretation **Credits: 3.00**
 SPAN 494. Practical Medical Spanish **Credits: 3.00**
 SPAN 476. Culture and Medicine in Latin America **Credits: 3.00**¹
 SPAN 478. Spanish for Medical Professionals III **Credits: 3.00**¹

Total: 18 Credit Hours

Footnote

¹ May take as an elective course if not taken as a required course.

Minimum Grades

A student must receive a minimum grade of "C-" for course credits to count toward any major or minor in the Department of FLLC.

Modern Foreign Language Minor

A minor in a modern foreign language consists of the specified upper-division courses in a specific language.

Arabic

Courses

ARAB 300. Arabic Grammar and Communication **Credits: 3.00**
 ARAB 320. Arabic Oral and Written Communication **Credits: 3.00**
 One 300 or 400-level ARAB literature course *3 Credit Hours*
 Three other 300 or 400-level ARAB courses *9 Credit Hours*

Total: 18 Credit Hours

Chinese

Courses

CHIN 300. Chinese Grammar and Communication **Credits: 3.00**
 CHIN 320. Chinese Oral and Written Communication **Credits: 3.00**
 One 300 or 400-level CHIN literature course *3 Credit Hours*
 Three other 300 or 400-level CHIN courses *9 Credit Hours*

Total: 18 Credit Hours

French

Courses

FR 300. Grammar and Communication **Credits: 3.00**
 FR 320. French Oral and Written Communication **Credits: 3.00**
 One 300 or 400-level FR literature course *3 Credit Hours*
 Three 300 or 400-level FR courses *9 Credit Hours*

Total: 18 Credit Hours

German

Courses

GER 300. Grammar and Communication **Credits: 3.00**
 GER 320. Oral and Written Communication **Credits: 3.00**
 One 300 or 400-level GER literature course *3 Credit Hours*
 Three other 300 or 400-level GER courses *9 Credit Hours*

Total: 18 Credit Hours

Italian

Courses

ITAL 300. Italian Grammar and Communication **Credits: 3.00**
 ITAL 320. Oral and Written Communication **Credits: 3.00**
 One 300- or 400-level Italian literature course¹ *3 Credit Hours*
 Three 300- or 400-level other Italian courses¹ *9 Credit Hours*

Total: 18 Credit Hours

Footnote

¹ Up to two courses in English may be counted toward the minor requirements with the approval of the academic unit head.

Russian

Courses

RUS 300. Grammar and Communication **Credits: 3.00**
 RUS 320. Russian Oral and Written Communication **Credits: 3.00**
 One 300 or 400-level RUS literature course *3 Credit Hours*
 Three 300 or 400-level RUS courses *9 Credit Hours*

Total: 18 Credit Hours

Spanish

Courses

SPAN 300. Grammar and Communication **Credits: 3.00**
SPAN 320. Oral and Written Communication **Credits: 3.00**
or
SPAN 321. Oral and Written Communication (for Heritage Speakers) **Credits: 3.00**
SPAN 335. Introduction to Hispanic Literature **Credits: 3.00**
Three other 300 or 400-level SPAN courses *9 Credit Hours*

Total: 18 Credit Hours

Minimum Grades

A student must receive a minimum grade of "C-" for course credits to count toward any major or minor in the Department of FLLC.

Spanish-English Translation and Interpretation Minor

Marianne Mason, **Adviser**
Phone: (540) 568-6327
Email: masonmx@jmu.edu

Translation and interpretation are two of today's fastest growing professions. An obvious requirement for anyone wishing to enter these professions is the ability to speak two languages fluently. Students who wish to make a positive impact as a translator or interpreter, however, require more than just the ability to speak two languages well. What they need is the linguistic, cultural and technical expertise they can only get from courses designed specifically to prepare them for the demands of these challenging professions. In the minor in translation and interpretation, students take their first steps toward acquiring this expertise.

The minor comprises one linguistic component, one elective component and four profession-specific linguistic components for a total of 18 credit hours.

Required Courses: 9 Credit Hours

SPAN 300. Grammar and Communication **Credits: 3.00**
SPAN 435. Translation Strategies **Credits: 3.00**
SPAN 436. Introduction to Interpretation **Credits: 3.00**

One elective Spanish course: 3 Credit Hours

SPAN 308. Latin American Cultures **Credits: 3.00**
SPAN 312. Translation Competencies **Credits: 3.00**
SPAN 320. Oral and Written Communication **Credits: 3.00**
or
SPAN 321. Oral and Written Communication (for Heritage Speakers) **Credits: 3.00**
SPAN 370. Legal Spanish **Credits: 3.00**
SPAN 407. Aspects of Contemporary Spanish Culture and Society **Credits: 3.00**

SPAN 408. Aspects of Latin American Culture **Credits: 3.00**
SPAN 447. Special Topics in Spanish Culture **Credits: 3.00**
SPAN 476. Culture and Medicine in Latin America **Credits: 3.00**
SPAN 477. Culture and Medicine in Spain **Credits: 3.00**
SPAN 485. Business and Society in Latin America **Credits: 3.00**
SPAN 486. Business and Society in Spain **Credits: 3.00**

Choose one: 3 Credit Hours

FL 410. Introduction to Romance Linguistics **Credits: 3.00**
FL 430. Forensic Linguistics: Language and the Law **Credits: 3.00**
SPAN 310. Introduction to Spanish Linguistics **Credits: 3.00**
SPAN 311. Contrastive Linguistics **Credits: 3.00**
SPAN 315. Spanish Phonetics **Credits: 3.00**
SPAN 404. Spanish in the United States **Credits: 3.00**
SPAN 448. Special Topics in Spanish Linguistics **Credits: 3.00**

Choose one: 3 Credit Hours

SPAN 494. Practical Medical Spanish **Credits: 3.00**
SPAN 495. Practical Spanish for Public Safety/Legal Spanish **Credits: 3.00**
SPAN 496. Translation/Interpreting Internship **Credits: 3.00**

Total: 18 Credit Hours

Minimum Grades

A student must receive a minimum grade of "C-" for course credits to count toward any major or minor in the Department of FLLC.

Department of Geology and Environmental Science

Stephen A. Leslie, **Department Head**
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Professors

S. Baedke, L. Eaton, L. Fichter, J. Haynes, E. Johnson, S. Leslie, E. Pyle, K. St. John, St. Whitmeyer

Associate Professors

Y. Admassu, R. McGary

Assistant Professors

C. Elmi, Sh. Whitmeyer, A. Garcia, W. Lukens, D. Wijesinghe

Instructors

M. Heller, S. Shomo, C. Kaznoski

Mission Statement

Our mission is to serve two vital needs of the JMU students. First, the majors in geology present high-quality programs of specialized study focusing on Earth materials, internal and external Earth processes, analysis of Earth history and application of geology to environmental and engineering issues. In support of this mission is a commitment to foster the ability to think analytically and to communicate both within the discipline and with non-scientists. Course work and research experiences prepare the student for postgraduate study or professional careers that are subject to rapidly changing societal needs. Second, our department strives to enhance the university's general education program by offering timely and challenging courses that provide insight into Earth processes and human-environment interactions. These courses promote life-long liberal learning by fostering critical thinking and an awareness of natural science.

Goals

Provide a stimulating, intellectual environment for students in geology and environmental science that will generate interest and enthusiasm for learning and will provide a solid foundation for graduate work and careers in geology and environmental science.

Teach science as science is practiced. Since the advancement of scientific knowledge often occurs within a social context – collaboration among scientists, conferences, seminars – the goal is to develop a similar mode of operation for the geology program.

Provide high-quality, relevant general studies courses within the discipline that focus on the fundamental science in the societal context (e.g., environmental change, climate change, hazards). These courses will incorporate critical thinking and an appreciation of human-environment interactions.

Career Opportunities

Earth Science Teacher
Engineering Geologist
Environmental Geologist
Environmental Scientist/Specialist
Geochemist
Government or Industry Geologist
Geological Oceanographer
Geomorphologist
Geophysicist
Hydrogeologist
Meteorologist
Science Museum Curator
Paleoclimatologist/Paleoceanographer
Paleontologist
Petroleum Geologist
Soil Scientist

Co-curricular Activities and Organization

The department encourages majors and minors to participate in the student Geology Club, which sponsors field trips, camping excursions, and hosts educational activities for elementary school students. Geology majors are

encouraged to apply to be laboratory teaching assistants and research assistants for faculty in the department. Majors and minors are also strongly encouraged to become members of one or more of the following geoscience organizations and to present their research at the affiliated regional or national meetings:

Geological Society of America (GSA)
American Association of Petroleum Geologists (AAPG)
American Geophysical Union (AGU)
National Association of Geoscience Teachers (NAGT)

Geology, B.S.

Program Description

The Department of Geology and Environmental Science offers a B.S. and a B.A. degree. Both degree options have a research requirement that includes a formal presentation.

Students must complete 12 hours of upper-level electives (300 or 400 level) to meet the requirements for a B.S. in geology. GEOL 301, GEOL 320, GEOL 367, GEOL 401 and GEOL 477 do not count as upper level electives for the B.S. in geology. Students are strongly advised, but are not required, to select one of four concentrations to fulfill the 12 hours of upper level electives:

General Geology Concentration
Environmental and Engineering Geology Concentration
Life, Ocean and Climate Concentration
Solid Earth and Tectonics Concentration

The B.A. degree with a major in Earth Science prepares individuals to work in a wide range of professional public sector service careers where preparation in earth science and communication of science to nonscientific audiences is a requirement or an asset. This includes the preparation of earth science teachers.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement (in addition to General Education) ²	3
Scientific Literacy requirement (in addition to General Education) ²	3-4
Major requirements (listed below)	68-76
General Electives	2-11
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The quantitative and scientific literacy requirements are met by courses required by the major.

Major Requirements

Core Requirements

GEOL 110L. Physical Geology Laboratory [C3L] **Credits: 1.00**

or

GEOL 115L. Earth Systems and Climate Change Lab [C3L] **Credits: 1.00**

GEOL 230. Evolution of Earth (3, 2) **Credits: 4.00**

GEOL 280. Mineralogy (3, 2) **Credits: 4.00**

GEOL 291. Writing and Communicating in the Geosciences **Credits: 1.00**

GEOL 300. Introduction to Petrology (3, 3) **Credits: 4.00**

GEOL 387. Stratigraphy, Structure and Tectonics (3, 2) **Credits: 4.00**

GEOL 388. Advanced Structure, Stratigraphy, Tectonics (3,2) **Credits: 4.00**

GEOL 399. Field Geology **Credits: 3.00 - 6.00**

Choose one of the following: 3 Credit Hours

GEOL 102. Environment: Earth [C3NS] **Credits: 3.00**

GEOL 110. Physical Geology [C3NS] **Credits: 3.00**

GEOL 115. Earth Systems and Climate Change [C3NS] **Credits: 3.00**

GEOL 210. Applied Physical Geology [C3NS] **Credits: 3.00**

Research Requirements: 2-6 Credit Hours

In addition to GEOL 291, choose from the following to complete the research requirement. All majors must complete a minimum of two credits. Students conducting research with faculty should select GEOL 497; Honors students doing research with faculty must complete a minimum of six credits in GEOL 499A/GEOL 499B/GEOL 499C. All students must give a formal presentation to fulfill this requirement.

GEOL 491. Geological Literature and Research **Credits: 2.00**

GEOL 494. Internship in Geology **Credits: 1.00 - 3.00**

GEOL 497. Problems in Geology **Credits: 1.00 - 3.00**

GEOL 499A. Honors in Geology **Credits: 1.00 and**

GEOL 499B. Honors in Geology **Credits: 2.00 and**

GEOL 499C. Honors in Geology **Credits: 3.00**

Total: 30-37 Credit Hours

Courses

The B.S. degree in geology is designed for students who plan to obtain professional employment in geology or enter graduate school upon graduation. It is recommended that incoming B.S. degree students complete the following courses prior to enrolling in required geology courses numbered 300 and higher.

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

CHEM 132. General Chemistry II **Credits: 3.00**

CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

MATH 235. Calculus I [C3QR] **Credits: 4.00**

or

MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00 and**

MATH 232. Calculus with Functions II **Credits: 3.00**

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

or

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**

or

MATH 236. Calculus II **Credits: 4.00**

Choose one of the following two sequences: 8 Credit Hours

PHYS 140. College Physics I [C3PP] **Credits: 3.00**

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**

PHYS 150. College Physics II **Credits: 3.00**

PHYS 150L. General Physics Laboratory **Credits: 1.00**

or

PHYS 240. University Physics I [C3PP] **Credits: 3.00**

PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00**

PHYS 250L. University Physics Laboratory II **Credits: 1.00**

PHYS 250. University Physics II **Credits: 3.00**

Total: 23-26 Credit Hours

Additional Information

Students planning graduate study in some areas of the geosciences should consider courses in mathematics, physics or chemistry beyond those required for the B.S. major.

Concentrations

The B.S. degree option recommends that each student complete at least 12 credit hours chosen from one of the four concentrations.

General Geology Concentration

GEOL 302. Sedimentary Petrology **Credits: 1.00**

GEOL 350. Paleobiology (3, 2) **Credits: 4.00**

GEOL 355. Geochemistry of Natural Waters **Credits: 3.00**

GEOL 377. Earth Surface Processes (2, 2) **Credits: 3.00**

GEOL 380. Genetic Mineralogy (2, 2) **Credits: 3.00**

GEOL 390. Laboratory Techniques in Geology (2, 2) **Credits: 3.00**

GEOL 398. Topics in Geology **Credits: 1.00 - 4.00**

GEOL 400. Geology and Ecology of the Bahamas **Credits: 3.00**

GEOL 405. Vertebrate Paleontology **Credits: 3.00**

GEOL 406. Paleoclimatology and Paleoceanography **Credits: 3.00**

GEOL 410. Engineering Geology (2, 2) **Credits: 3.00**

GEOL 430. Environmental Soil Science (2, 2) **Credits: 3.00**

GEOL 440. Geophysics (3, 2) **Credits: 4.00**

GEOL 442. Field Geophysics **Credits: 3.00**

GEOL 460. Hydrogeology (2, 2) **Credits: 3.00**

GEOL 489. Quantitative Methods in Geology **Credits: 3.00**

Environmental and Engineering Geology Concentration

The environmental and engineering geology concentration provides students with the necessary skills to enter the environmental and/or geotechnical engineering industry. Students will have the opportunity to take courses that focus on soil classification, ground water flow mechanics, water chemistry, soil/rock mechanics, geomorphology and geophysics.

Choose at least 2 of the following courses:

GEOL 355. Geochemistry of Natural Waters **Credits: 3.00**

GEOL 377. Earth Surface Processes (2, 2) **Credits: 3.00**

GEOL 410. Engineering Geology (2, 2) **Credits: 3.00**

GEOL 430. Environmental Soil Science (2, 2) **Credits: 3.00**

GEOL 442. Field Geophysics **Credits: 3.00**

GEOL 460. Hydrogeology (2, 2) **Credits: 3.00**

Choose at least 1 of the following courses:

GEOL 360. GIS for the Geoscientist **Credits: 3.00**

GEOL 390. Laboratory Techniques in Geology (2, 2) **Credits: 3.00**

GEOL 489. Quantitative Methods in Geology **Credits: 3.00**

Life, Ocean and Climate Concentration

This concentration is meant for students interested in academic or professional careers that requires a background in the evolution of the Earth system, life and climate. The recommended course work is designed to provide students with content knowledge and research skills to consider questions of evolution, extinction, and global climate change from a geologic perspective.

Choose at least 2 of the following courses:

GEOL 302. Sedimentary Petrology **Credits: 1.00**

GEOL 307. Planetary Geology (2, 2) **Credits: 3.00**

GEOL 380. Genetic Mineralogy (2, 2) **Credits: 3.00**

GEOL 440. Geophysics (3, 2) **Credits: 4.00**

Choose at least 1 of the following courses:

GEOL 360. GIS for the Geoscientist **Credits: 3.00**

GEOL 390. Laboratory Techniques in Geology (2, 2) **Credits: 3.00**

GEOL 489. Quantitative Methods in Geology **Credits: 3.00**

Solid Earth and Tectonics Concentration

The solid Earth and tectonics track is designed for students who are interested in studying the evolution of the Earth and the methods to study it. The recommended course work is designed to provide students with content knowledge and skills to investigate the structure of the Earth. Possible

professional opportunities include, but are not limited to, mining, seismic investigations, and geologic mapping.

Choose at least 2 of the following courses:

GEOL 302. Sedimentary Petrology **Credits: 1.00**

GEOL 307. Planetary Geology (2, 2) **Credits: 3.00**

GEOL 380. Genetic Mineralogy (2, 2) **Credits: 3.00**

GEOL 440. Geophysics (3, 2) **Credits: 4.00**

Choose at least 1 of the following courses:

GEOL 360. GIS for the Geoscientist **Credits: 3.00**

GEOL 390. Laboratory Techniques in Geology (2, 2) **Credits: 3.00**

GEOL 489. Quantitative Methods in Geology **Credits: 3.00**

Recommended Schedule for Majors

First Year

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

CHEM 132. General Chemistry II **Credits: 3.00**

CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

GEOL 110. Physical Geology [C3NS] **Credits: 3.00 and**

GEOL 110L. Physical Geology Laboratory [C3L] **Credits: 1.00**

or

GEOL 115. Earth Systems and Climate Change [C3NS] **Credits: 3.00 and**

GEOL 115L. Earth Systems and Climate Change Lab [C3L] **Credits: 1.00**

GEOL 230. Evolution of Earth (3, 2) **Credits: 4.00**

General Education Courses **Credits: 12.00**

Choose one of the following: 6-8 Credit Hours

MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00 and**

MATH 232. Calculus with Functions II **Credits: 3.00**

or

MATH 235. Calculus I [C3QR] **Credits: 4.00 and**

MATH 236. Calculus II **Credits: 4.00**

First Year Total: 34-36 Credit Hours

Second Year

GEOL 280. Mineralogy (3, 2) **Credits: 4.00**

GEOL 291. Writing and Communicating in the Geosciences **Credits: 1.00**

GEOL 387. Stratigraphy, Structure and Tectonics (3, 2) **Credits: 4.00**

Upper-level geology course to fulfill concentration **Credits: 3.00**

General Education courses **Credits: 11.00**

Choose one of the following two sequences: 8 Credit Hours

PHYS 140. College Physics I [C3PP] **Credits: 3.00**

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**
PHYS 150. College Physics II **Credits: 3.00**
PHYS 150L. General Physics Laboratory **Credits: 1.00**
or
PHYS 240. University Physics I [C3PP] **Credits: 3.00**
PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00**
PHYS 250. University Physics II **Credits: 3.00**
PHYS 250L. University Physics Laboratory II **Credits: 1.00**

Second Year Total: 31 Credit Hours

Third Year

GEOL 300. Introduction to Petrology (3, 3) **Credits: 4.00**
GEOL 388. Advanced Structure, Stratigraphy, Tectonics (3,2) **Credits: 4.00**
GEOL 399. Field Geology **Credits: 3.00 - 6.00**
Upper-level geology courses to fulfill concentration **Credits: 8.00**
General Education courses **Credits: 9.00**
General Electives **Credits: 3.00**

Third Year Total: 34 Credit Hours

Fourth Year

Upper-Level geology courses to fulfill concentration **Credits: 9.00 - 20.00**
Choose from the following: 2-6 Credit Hours

GEOL 491. Geological Literature and Research **Credits: 2.00**
GEOL 494. Internship in Geology **Credits: 1.00 - 3.00**
GEOL 497. Problems in Geology **Credits: 1.00 - 3.00**
GEOL 499A. Honors in Geology **Credits: 1.00 and**
GEOL 499B. Honors in Geology **Credits: 2.00 and**
GEOL 499C. Honors in Geology **Credits: 3.00**

Fourth Year Total: 11-26 Credit Hours

Program Total: 120 Credit Hours

Geology, Earth Science Major, B.A.

Program Description

The Department of Geology and Environmental Science offers Bachelor of Science (B.S.) and Bachelor of Arts (B.A.) degrees in geology. Both degree options have a research requirement that includes a formal presentation. The B.S. degree has two concentrations: a general geology concentration designed for students who want to take a wider range of geology elective courses and an environmental and engineering geology concentration designed for students who want to focus their geology electives toward applied environmental science.

Earth science majors earn the B.A. degree. The major in Earth science prepares individuals to work in a wide range of professional public sector service careers

where preparation in Earth science and communication of science to nonscientific audiences is a requirement or an asset. This includes the preparation of Earth science teachers.

Major in Earth Science

The major in Earth science is designed to integrate all the Earth sciences in a systems approach to understanding the Earth. This includes incorporating and integrating subjects such as oceanography, meteorology and astronomy. The emphasis is on the preparation of individuals to work in a wide range of professional public sector service careers where preparation in Earth science and communication of science to non-scientific audiences is a requirement or an asset.

Teaching Licensure

Students interested in becoming teachers must meet specific curriculum requirements in their major as part of the undergraduate academic degree. The major in Earth science includes state course requirements in astronomy, meteorology and oceanography, to total no less than 32 hours in the Earth sciences (including geology) and a minimum of 16 hours total in physics, chemistry and biology.

In addition to the general education and academic major requirements, Earth science majors desiring secondary teacher licensure must be admitted to the pre-professional program in secondary education at the undergraduate level and complete the graduate level Master of Arts in Teaching degree.

It is critical that students seeking teaching licensure consult regularly with both their education adviser and their major adviser to support their progression through the programs.

For a full description of the program in secondary teaching, refer to the Department of Middle, Secondary and Mathematics Education, in addition to the College of Education.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course(s) (in addition to General Education courses) ³	3
Major requirements (listed below including cognate sciences and math)	59-63
General Electives	0-17
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232), or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures' placement exam.

³ 100, 200, 300 or 400-level course acceptable or consult the list of courses satisfying B.A. degree requirements at <http://www/jmu.edu/registrar>.

Major Requirements

Earth science students are expected to complete CHEM 131-CHEM 131L before enrolling in geology courses numbered 300 and higher.

Core Requirements

GEOL 110L. Physical Geology Laboratory [C3L] **Credits: 1.00**

GEOL 167. History and Philosophy of the Geosciences **Credits: 3.00**

GEOL 211. Introduction to Oceanography [C3NS] **Credits: 3.00**

or

GEOL 401. Oceanography for Teachers **Credits: 3.00**

GEOL 230. Evolution of Earth (3, 2) **Credits: 4.00**

GEOL 291. Writing and Communicating in the Geosciences **Credits: 1.00**

GEOL 320. Meteorology **Credits: 3.00**

GEOL 367. Genesis of Solid Earth Materials (3, 2) **Credits: 4.00**

GEOL 377. Earth Surface Processes (2, 2) **Credits: 3.00**

GEOL 387. Stratigraphy, Structure and Tectonics (3, 2) **Credits: 4.00**

GEOL 477. Contemporary Issues in the Geosciences **Credits: 4.00**

Choose one of the following: 3 Credit Hours

GEOL 102. Environment: Earth [C3NS] **Credits: 3.00**

GEOL 110. Physical Geology [C3NS] **Credits: 3.00**

GEOL 115. Earth Systems and Climate Change [C3NS] **Credits: 3.00**

GEOL 210. Applied Physical Geology [C3NS] **Credits: 3.00**

Choose one of the following: 3 Credit Hours

ASTR 220. General Astronomy I: The Night Sky, the Solar System and Stars **Credits: 3.00**

GEOL 307. Planetary Geology (2, 2) **Credits: 3.00**

Research Requirements: 2-6 Credit Hours

In addition to GEOL 291, choose from the following to complete the research requirement. All majors must complete a minimum of two credits. Students conducting research with faculty should select GEOL 497; Honors students doing research with faculty must complete a minimum of six credits in GEOL 499A/GEOL 499B/GEOL 499C. All students must give a formal presentation to fulfill this requirement.

GEOL 491. Geological Literature and Research **Credits: 2.00**

GEOL 494. Internship in Geology **Credits: 1.00 - 3.00**

GEOL 497. Problems in Geology **Credits: 1.00 - 3.00**

GEOL 499A. Honors in Geology **Credits: 1.00**

GEOL 499B. Honors in Geology **Credits: 2.00**

GEOL 499C. Honors in Geology **Credits: 3.00**

Total: 37-41 Credit Hours

Cognate Science and Mathematics Area

The B.A. degree option requires that each student complete at least 16 hours of cognate science credit hours with at least one course from biology, physics and chemistry chosen from:

Biology: 4 Credit Hours

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00**

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

BIO 350. Paleobiology **Credits: 4.00**

Chemistry: 4 Credit Hours

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

CHEM 132. General Chemistry II **Credits: 3.00**

CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

Physics: 3-4 Credit Hours

PHYS 140. College Physics I [C3PP] **Credits: 3.00**

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**

PHYS 150. College Physics II **Credits: 3.00**

PHYS 150L. General Physics Laboratory **Credits: 1.00**

or

GEOL 440. Geophysics (3, 2) **Credits: 4.00**

Math: 3-4 Credit Hours

The B.A. option requires that each student complete at least six credit hours of mathematics, including one of the following:

MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**

MATH 232. Calculus with Functions II **Credits: 3.00**

MATH 235. Calculus I [C3QR] **Credits: 4.00**

Total: 20-22 Credit Hours

Recommended Minors for the Major in Earth Science

The Earth science major recommends (but does not require) that students complete a minor in a complementary program, suitable toward the career goals of the student.

Students may also propose a minor that is not listed above to their adviser for approval.

Minor

Approved minors include:

Astronomy *12 Credit Hours*¹
Biology *12-16 Credit Hours*¹
Business Analytics *18-19 Credit Hours*
Chemistry *20 Credit Hours*¹
Economics *18 Credit Hours*
Environmental Information Systems *24 Credit Hours*
Environmental Management Minor *19 Credit Hours*¹
Environmental Science *15 Credit Hours*¹
Environmental Studies *18 Credit Hours*¹
Humanitarian Affairs *18 Credit Hours*
Geographic Science *19 Credit Hours*
Mathematics *14-18 Credit Hours*¹
Nonprofit Studies *19-21 Credit Hours*
Physics *14-22 Credit Hours*¹
Political Science *19 Credit Hours*
Public Policy and Administration *19 Credit Hours*
Science, Technology and Society *18 Credit Hours*
Pre-Professional Secondary Education (SEED) Minor *20-22 Credit Hours*
Sociology Minor *18 Credit Hours*
Statistics *15-16 Credit Hours*¹
Urban and Regional Studies *24 Credit Hours*
Writing, Rhetoric and Technical Communication *18 Credit Hours*

Footnote

¹ Credit hours for courses in the minor that are already required courses for the Earth Science major have been subtracted from the total hours listed here.

Recommended Schedule for Majors

First Year

Madison Foundations (formerly Cluster One: Skills for the 21st Century) *9-12 Credit Hours*
GEOL 110. Physical Geology [C3NS] **Credits: 3.00**
GEOL 110L. Physical Geology Laboratory [C3L] **Credits: 1.00**
GEOL 167. History and Philosophy of the Geosciences **Credits: 3.00**
GEOL 230. Evolution of Earth (3, 2) **Credits: 4.00**
MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**
CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

Total: 27-30 Credit Hours

Second Year

GEOL 211. Introduction to Oceanography [C3NS] **Credits: 3.00**
GEOL 291. Writing and Communicating in the Geosciences **Credits: 1.00**
GEOL 320. Meteorology **Credits: 3.00**
GEOL 367. Genesis of Solid Earth Materials (3, 2) **Credits: 4.00**
GEOL 377. Earth Surface Processes (2, 2) **Credits: 3.00**
Foreign language courses *1-8 Credit Hours*¹
General Education courses *12 Credit Hours*

Foreign language courses 1-8 Credit Hours

Total: 27-34 Credit Hours

Footnote

¹ Foreign language at the intermediate level.

Third Year

GEOL 387. Stratigraphy, Structure and Tectonics (3, 2) **Credits: 4.00**
Cognate science and mathematics *9-12 Credit Hours*
General Education courses *9 Credit Hours*

Choose one of the following: 3 Credit Hours

ASTR 220. General Astronomy I: The Night Sky, the Solar System and Stars **Credits: 3.00**
GEOL 307. Planetary Geology (2, 2) **Credits: 3.00**

Total: 25-28 Credit Hours

Fourth Year

GEOL 477. Contemporary Issues in the Geosciences **Credits: 4.00**
Cognate science *3-4 Credit Hours*
Geology electives *4-6 Credit Hours*
Electives *12-20 Credit Hours*

Choose one from the following: 2-6 Credit Hours

GEOL 491. Geological Literature and Research **Credits: 2.00**
GEOL 494. Internship in Geology **Credits: 1.00 - 3.00**
GEOL 497. Problems in Geology **Credits: 1.00 - 3.00**

GEOL 499A. Honors in Geology **Credits: 1.00**
GEOL 499B. Honors in Geology **Credits: 2.00**
GEOL 499C. Honors in Geology **Credits: 3.00**

Total: 24-39 Credit Hours

Program Total: 120 Credit Hours

Earth Science (See Geology, Earth Science Major)

See Geology, Earth Science Major, B.A.

Earth Science Teaching Licensure

Teaching Licensure

Students interested in becoming teachers must meet specific curriculum requirements in their major as part of the undergraduate academic degree. The Earth science major includes state course requirements in astronomy, meteorology and oceanography, to total no less than 32 hours in the Earth sciences (including geology) and a minimum of 16 hours total in physics, chemistry and biology.

In addition to the general education and academic major requirements, Earth science majors desiring secondary teacher licensure must be admitted to the pre-professional program in secondary education at the undergraduate level and complete the graduate level Master of Arts in Teaching degree.

It is critical that students seeking teaching licensure consult regularly with both their education adviser and their major adviser to support their progression through the programs. For a full description of the program in secondary teaching, refer to the Department of Middle, Secondary and Mathematics Education, in addition to the College of Education.

Geology Minor

Minor Requirements

The requirement for a minor in geology is a minimum of 18 credit hours of geology approved by the student's geology adviser.

Geophysics Minor

The minor in geophysics is designed to provide adequate training for professional work or graduate school in geophysics in the broad sense. No more than 10 credits from the geophysics minor may be used to double count with a major. The requirements for the geophysics minor are a minimum of 21 credits, including at least one semester each of geology, mathematics and physics, distributed as follows:

Required Courses

Choose one of the following: 4 Credit Hours

GEOL 110. Physical Geology [C3NS] **Credits: 3.00** and
GEOL 110L. Physical Geology Laboratory [C3L] **Credits: 1.00**
or
GEOL 210. Applied Physical Geology [C3NS] **Credits: 3.00** and

GEOL 110L. Physical Geology Laboratory [C3T1G3] **1.00**
or
PHYS 140. College Physics I [C3PP] **Credits: 3.00** and
PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**
or
PHYS 240. University Physics I [C3PP] **Credits: 3.00** and
PHYS 140L. General Physics Lab I [C3T1G2] **1.00**

Complete all of the following:

GEOL 440. Geophysics (3, 2) **Credits: 4.00**
GEOL 442. Field Geophysics **Credits: 3.00**
MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**
MATH 248. Computers and Numerical Algorithms **Credits: 4.00**

Choose one of the following elective courses: 3-4 Credit Hours

Additional elective courses permitted upon approval from minor adviser.

ASTR 220. General Astronomy I: The Night Sky, the Solar System and Stars **Credits: 3.00**
CHEM 331. Physical Chemistry I **Credits: 3.00**
GEOL 410. Engineering Geology (2, 2) **Credits: 3.00**
GEOL 460. Hydrogeology (2, 2) **Credits: 3.00**
MATH 237. Calculus III **Credits: 4.00**
PHYS 260. University Physics III **Credits: 3.00**

Total: 22-23 Credit Hours

Note for Geology Majors

The geology major requires a sequence of math and physics courses (see major program for details). The following sequence of courses will satisfy the major requirements and is strongly recommended for students interested in geophysics. In particular, MATH 236 is a prerequisite for several courses included in the geophysics minor.

MATH 235. Calculus I [C3QR] **Credits: 4.00**
MATH 236. Calculus II **Credits: 4.00**
PHYS 240. University Physics I [C3PP] **Credits: 3.00** (and Lab)
PHYS 250. University Physics II **Credits: 3.00** (and Lab)

Climate Science Minor

Bill Lukens, **Coordinator**
Phone: (540) 568-7134
Email: lukenswe@jmu.edu

Mary Kimsey, **Coordinator**
Phone: (540) 568-6722
Email: kimseymb@jmu.edu

The Climate Science Minor introduces students to the domain knowledge and analytical skills necessary for understanding and investigating Earth's climate system. The program serves as an organizing framework for students interested in climate science and will broaden disciplinary expertise for advanced study, graduate programs and/or employment. The minor is structured in three tiers:

- 1) Introductory lecture and lab courses serve as an entry point to the program (4 credits total);
- 2) Content-specific courses build domain knowledge in climate science (minimum of 3 courses);
- 3) A minimum of one course focused on mathematical and/or data analytical skills provides tools necessary for working with scientific data; and
- 4) The remaining credit hours to fulfill the 18 credit-hour minimum requirement may consist of additional courses closely aligned with climate science, such as undergraduate research, internships and honors theses, upon approval by the program director(s).

Students are encouraged to discuss with their advisers or the program director(s) how climate science may interface with their primary degree program(s). The Climate Science Minor requires a minimum of 18 credit hours, and no more than six credits from the minor may be used to double-count with a major or another minor.

Introductory Lecture and Lab: 4 Credit Hours

A total of four credit hours of introductory lecture and lab course(s) must be taken:

- GEOG 210. Physical Geography (2, 2) **Credits: 4.00**
or
GEOL 115. Earth Systems and Climate Change [C3NS] **Credits: 3.00 and**
GEOL 115L. Earth Systems and Climate Change Lab [C3L] **Credits: 1.00**

Content-Specific Courses: 9-10 Credit Hours

Choose a minimum of three courses from the following:

- GEOG 301. Introduction to Natural Disasters Response **Credits: 3.00**
GEOG 327. Climatology **Credits: 3.00**¹
GEOG 329. Global Climate Change **Credits: 3.00**¹
GEOG 330. Weather, Climate and Society **Credits: 3.00**
GEOG 430. Dynamics of the Atmosphere **Credits: 3.00**¹
GEOL 211. Introduction to Oceanography [C3NS] **Credits: 3.00**
GEOL 320. Meteorology **Credits: 3.00**
GEOL 355. Geochemistry of Natural Waters **Credits: 3.00**¹
GEOL 406. Paleoclimatology and Paleoceanography **Credits: 3.00**¹
CHEM 353. Environmental Chemistry **Credits: 3.00**¹
BIO 354. Global Climate Change and Life: Ecological and Biological Impacts of Climate Variability **Credits: 4.00**¹

Analytical Skills: 3-4 Credit Hours

At least one course focused on analytical skills must be taken. Choose at least one course from the follow lists, and note that only one programming course or one geospatial course may be counted toward the 18 credit hour total for the minor:

Programming Courses

- CS 149. Introduction to Programming **Credits: 3.00**¹
or
MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**¹

Geospatial Courses

- GEOG 215. Introduction to Geographic Information Science and Cartography **Credits: 3.00**
or
GEOG 216. Earth Observation and GPS **Credits: 3.00**
or
GEOL 360. GIS for the Geoscientist **Credits: 3.00**¹

Other Analytical Skills Courses

- GEOL 440. Geophysics (3, 2) **Credits: 4.00**¹
GEOL 489. Quantitative Methods in Geology **Credits: 3.00**
GEOG 447. Climates Through Time **Credits: 3.00**¹
ISAT 420. Environmental Analysis and Modeling **Credits: 3.00**
MATH 268. Data Analysis and Visualization **Credits: 3.00**¹

Other Course Options: 0-2 Credit Hours

Students who have not fulfilled the 18 credit hours¹ with the above courses may fill the remaining credit hours with a course or research experience approved by the program director(s). Course content must include a focus on Earth's climate system at any scale, and may include intersections with society, individuals and/or natural systems. Examples of course options include but are not limited to the following.

- GEOG 308. Environment, Nature and Society **Credits: 3.00**²
GEOG 415. Environment, Landscape and Culture **Credits: 3.00**²
GEOG 490. Senior Research or Field Practicum **Credits: 3.00**^{2,3}
GEOG 495. Internship in Geography **Credits: 3.00 - 6.00**³
GEOG 497. Independent Study **Credits: 3.00**³
GEOG 499 A, B, C. Honors in Geography **Credits: 1.00 - 3.00**³
ENVT 200. Environmental Systems Theory **Credits: 3.00**
ENVT 225. Environmental Advocacy and the Psychology of Change **Credits: 3.00**
GEOL 398. Topics in Geology **Credits: 1.00 - 4.00**³
GEOL 491. Geological Literature and Research **Credits: 2.00**^{2,3}
GEOL 497. Problems in Geology **Credits: 1.00 - 3.00**^{2,3}
GEOL 499A. Honors in Geology **Credits: 1.00**²
GEOL 499B. Honors in Geology **Credits: 2.00**³
GEOL 499C. Honors in Geology **Credits: 3.00**³
ISAT 490. Capstone Experience I **Credits: 1.00**³
ISAT 491. Senior Capstone Project I **Credits: 1.00**³
ISAT 499A. Senior Honors Thesis I **Credits: 1.00**³
ISAT 499B. Senior Honors Thesis II **Credits: 1.00**³

Footnotes

¹ Students who have met the 18 credit hour requirement for the minor should speak to their adviser about the possibility of having the "Other Course Option" waived.

² These courses have prerequisites listed.

³ These courses require director approval.

Total: 18 Credit Hours

Hart School of Hospitality, Sport and Recreation Management

David Shonk, **Interim Director**
Phone: (540) 568-6585
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Location: Godwin Hall, Room 359
Website: <http://www.jmu.edu/hartschool>

Mission

We engage in transformational education through innovative teaching, scholarship and service.

Vision

We strive to be a leader impacting the future of global hospitality, sport and recreation.

Core Values

Excellence
Knowledge
Student Focus
Relationships
Diversity
Innovation
Ethical Decision-Making
Optimism

Hospitality Management, B.S.

Program Information

David Shonk, **Interim Director**
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Professor

R. Foucar-Szocki

Associate Professor

G. Hornsby, T. Kim

Assistant Professors

P. Li

Lecturers

M. Baltazar, D. Fickes, J. Girard, T. Lind, B. Swartz

Mission

The Hart School of Hospitality Management at James Madison University prepares students to be world class business leaders in the fast-paced, ever-changing and diverse hospitality industry. Students engage in transformational education as part of an extensive curriculum focused on high quality, student-centered educational experiences by participating in practical, applied, and experiential learning opportunities.

Goals

- To expose students to a rigorous academic and experiential learning program, including national certifications, two internships and over 1,000 hours of professional work experience prior to graduation.
- To provide an intimate educational setting of small classes, team learning experiences and meaningful personal contacts with faculty and industry professionals.
- To promote the use and development of technology, critical thinking, innovation and communication skills in hospitality leadership.
- To ensure that all HM students have a meaningful choice of job opportunities upon graduation.
- To build a set of leadership skills while providing students exceptional financial acumen.
- To maintain a faculty of knowledgeable and respected industry professionals, dedicated to continuous improvement via internships, authorship, industry contacts and participation at national and international industry conferences.

Career Opportunities: Readiness for the 21st Century and Beyond

For almost 50 years, the hallmark of the hospitality program at JMU's Hart School is its belief in creating a LEARN BY DOING environment that provides the foundational understanding of business principles and puts a services spin on it. This formula has led to thousands of successful leaders in the hospitality profession and related leadership positions globally.

Technology and artificial intelligence continue to evolve, and the Hart School Difference provides students with the necessary skills to compete and excel in

this new world. The spirit of innovation, leadership, collaboration, ethical reasoning and communication are interwoven in all coursework.

Each Fall and Spring, over 50 employers come to campus for the Hart School Internship and Career Fair. These employers' goal is simple, to hire as many JMU HM majors as possible for internships and full-time job employment. More details at <https://www.jmu.edu/hartschool/caps/career-fairs/spring/index.shtml>

Dukes helping Dukes is our philosophy of networking. Our alumni stay connected, want to hire fellow JMU Dukes, and together are making a difference around the world.

Finally, there are no guarantees, but rest assured that by being a hospitality management major in the Hart School, students will be taught by exceptional educators who care about their success both in and out of the classroom. Upon graduation, students will have a set of TRANSFERABLE skills that readies them for the challenges of the 21st century and beyond. Students will not only be prepared to join the workforce but to be leaders in the changing world of hospitality leadership and related services business.

Co-curricular Activities and Organizations

Professional Convention Management Association (PCMA) is a student organization that provides both educational and social programs to the hospitality management major. This group plans and coordinates an annual trip to the PCMA Annual Convention.

The National Society of Minorities in Hospitality (NSMH) is a student organization that explores the issues, challenges and opportunities for minorities in mega-industry. It participates in both regional and national conventions in association with industry leaders.

The James Madison University Student Chapter of Club Managers Association of America (JMU CMAA) is instrumental in exposing students to the profession of club management and its many career opportunities.

Eta Sigma Delta (ESD) is an honor society recognizing hospitality and tourism students for outstanding academic achievement, meritorious service and demonstrated professionalism.

Hospitality Sales & Marketing Association International (HSMIA) is a global organization of sales, marketing, and revenue management professionals representing all segments of the hospitality industry.

Degree and Major Requirements

The B. S. degree in Hospitality Management (HM) requires a minimum of 120 credit hours of undergraduate course work. All HM majors must complete either the general business minor or the Entrepreneurship minor for hospitality management, HM core and HM elective courses.

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative Requirement (in addition to General Education)	3
Scientific Literacy requirement (in addition to General Education)	3-4

Degree Requirements	Credit Hours
Hospitality Management: Required Core Courses	42
Hospitality Management: Elective Courses	9
General Business Minor or Entrepreneurship Minor ^{2,3}	18
University Electives	3-4
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² Successful completion of these courses with a 2.0 GPA will qualify the student for a general business minor; however, it is the responsibility of the student to complete the necessary paperwork in the College of Business to apply for the minor.

³ The 18 credit hour minors contain 6 credit hours which are fulfilled in the major core requirements (ACTG 244, MKTG 380).

Major Requirements

Hospitality Management Required Core: 42 Credit Hours

- HM 111. Overview of Hospitality and Tourism Management **Credits: 3.00**
- HM 112. Foundations in Leadership of Hospitality Management **Credits: 3.00**
- HM 222. Hospitality Professional Work Experience **Credits: 3.00**
- HM 251. Cost Control and Budgeting **Credits: 3.00**
- HM 252. Culinary Arts and Menu Management **Credits: 3.00**
- HM 321. Introduction to Event Management **Credits: 3.00**
- HM 322. Lodging, Clubs and Resort Operations and Technology **Credits: 3.00**
- HM 333. Internship in Hospitality Management **Credits: 3.00**
- HM 371. Profit Optimization and Revenue Management **Credits: 3.00**
- HM 422. Hospitality Human Resources Management **Credits: 3.00**
- HM 442. Hospitality Seminar **Credits: 3.00**
- HM 444. Supervisory Hospitality Internship **Credits: 3.00**
- ACTG 244. Accounting for Non-Business Majors **Credits: 3.00** ¹
- MKTG 380. Principles of Marketing **Credits: 3.00** ¹

Major Requirements Total: 42 Credit Hours

Footnote

¹ ACTG 244 and MKTG 380 require junior standing.

Hospitality Management Elective Courses: Choose 9 credit hours

- HM 101. Lecture Series in Hospitality Leadership and Innovation **Credits: 1.00**
- HM 201. Foundations of Hospitality, Sport and Recreation Management **Credits: 3.00**

HM 203. Foundations of Ethics and Law in Hospitality, Sport and Recreation Management **Credits: 3.00**

HM 244. Disney Internship **Credits: 3.00 – 6.00**

HM 298. Special Studies in Hospitality Management **Credits: 3.00**

HM 316. Country Club Management **Credits: 3.00**

HM 361. Italian Culture and Wine **Credits: 3.00**

HM 362. Italian Gastronomy **Credits: 3.00**

HM 411. Hospitality Law **Credits: 3.00**

HM 414. Beverage Management and Marketing **Credits: 3.00**

HM 417. Advanced Event Management **Credits: 3.00**

HM 419. Napa & Sonoma Wine and Culture **Credits: 3.00**

HM 421. Hospitality Ethics **Credits: 3.00**

HM 490. Special Studies in Hospitality and Tourism Management **Credits: 3.00**

HM 498. Special Topics in Hospitality and Tourism Management **Credits: 3.00**

HM 499. Honors **Credits: 1.00 – 6.00**

General Business Minor

Students in hospitality management must declare the business minor for hospitality management through the College of Business.

General Business Minor Courses

ACTG 244. Accounting for Non-Business Majors **Credits: 3.00** ^{1,2}

CIS 204. Computer Information Systems Fundamentals for Non-Business Majors **Credits: 3.00**

ECON 201. Introduction to Microeconomics **Credits: 3.00**

FIN 345. Finance Fundamentals for Non-Business Majors **Credits: 3.00**

MGT 305. Organizational Behavior and Human Resource Management **Credits: 3.00**

MKTG 380. Principles of Marketing **Credits: 3.00** ²

Total: 18 Credit Hours

Footnote

¹ Successful completion of COB 242 will substitute for ACTG 244.

² ACTG 244 and MKTG 380 are part of the required core for the HM Major.

Entrepreneurship Minor

Students in hospitality management must declare the entrepreneurship minor for hospitality management through the College of Business.

Entrepreneurship Minor Courses

ACTG 244. Accounting for Non-Business Majors **Credits: 3.00** ^{1,2}

MGT 310. Business Fundamentals for Entrepreneurs **Credits: 3.00**

MGT 320. Management of Innovation and Technology **Credits: 3.00**

MGT 471. Entrepreneurship and Small Business Management **Credits: 3.00**

MGT 472. New Venture Creation **Credits: 3.00**

MKTG 380. Principles of Marketing **Credits: 3.00** ²

Total: 18 Credit Hours

Footnotes

¹ Successful completion of COB 242 will substitute for ACTG 244.

² ACTG 244 and MKTG 380 are part of the required core for the HM Major.

Recommended Schedule for Majors

First Year

HM 111. Overview of Hospitality and Tourism Management **Credits: 3.00**

HM 112. Foundations in Leadership of Hospitality Management **Credits: 3.00**

Cluster One **Credits: 9.00**

General Education **Credits: 15.00**

Total: 30 Credit Hours

Second Year

HM 222. Hospitality Professional Work Experience **Credits: 3.00**

HM 251. Cost Control and Budgeting **Credits: 3.00**

HM 252. Culinary Arts and Menu Management **Credits: 3.00**

ACTG 244. Accounting for Non-Business Majors **Credits: 3.00**

CIS 204. Computer Information Systems Fundamentals for Non-Business Majors **Credits: 3.00**

ECON 201. Introduction to Microeconomics **Credits: 3.00**

Quantitative Requirement **Credits: 3.00**

General Education **Credits: 9.00**

Total: 30 Credit Hours

Third Year

HM 321. Introduction to Event Management **Credits: 3.00**

HM 322. Lodging, Clubs and Resort Operations and Technology **Credits: 3.00**

HM 333. Internship in Hospitality Management **Credits: 3.00**

HM 371. Profit Optimization and Revenue Management **Credits: 3.00**

MGT 305. Organizational Behavior and Human Resource Management **Credits: 3.00**

MKTG 380. Principles of Marketing **Credits: 3.00**

General Education and university electives **Credits: 9.00**

Hospitality Management Elective Courses **Credits: 3.00**

Total: 30 Credit Hours

Fourth Year

HM 422. Hospitality Human Resources Management **Credits: 3.00**

HM 442. Hospitality Seminar **Credits: 3.00**

HM 444. Supervisory Hospitality Internship **Credits: 3.00**

FIN 345. Finance Fundamentals for Non-Business Majors **Credits: 3.00**

University electives / scientific literacy **Credits: 12.00**

Hospitality Management Elective Courses **Credits: 6.00**

Total: 30 Credit Hours

Program Total: 120 Credit Hours

Sport and Recreation Management, B.S.

Program Information

David Shonk, **Interim Director**

Phone: (540) 568-6585

Email: shonkdj@jmu.edu

Location: Godwin Hall, Room 359

Website: <http://www.jmu.edu/hartschool>

Professors

D. Shonk, J. Wallace-Carr, S. West

Associate Professors

E. Anaza, B. Carr

Assistant Professors

A. Hallmon, S. Manjunath, K. Songkeng

Lecturers

A. Bosley, G. deBrun, A. Hayslett, B. Swartz

Mission

The mission of the sport and recreation program is to develop a community of learners through quality education that integrates theory, practice, and personal growth in the hospitality, sport and recreation industries.

We are dedicated to the development of future leaders in sport and management professions through a course of study that maximizes the potential of individuals and society.

Sport and recreation management is committed to providing:

An outstanding undergraduate program based on the criteria of relevant professional associations, which will enable graduates to be successful in their professional endeavors.

A program that builds upon the strong liberal studies background provided through General Education.

The opportunities that challenge students to think critically, to use technology and to appreciate the global community.

The research and development projects that push back the boundaries of knowledge and promote effective practice in sport and recreation management.

Career Opportunities

Graduates with this degree will be employed in professional sport organizations, semi-professional sport organizations, collegiate athletics, sport marketing agencies, sport broadcasting venues, facility management in both sport and recreation, community recreation agencies, commercial recreation

agencies, theme parks, military recreation as well as hotels, resorts and other hospitality and entertainment venues.

Careers in sport and recreation management are plentiful. The listing below offers examples of possible career paths and is not meant to be comprehensive.

Fitness/Health Club Manager

Sportscaster

Aerobics Instructor

Sports Agent

General Manager

Athletic Coach

Athletic Director

Sports Event Coordinator

Media Relations Specialist

Sports Information Specialist

YMCA Youth Leader

Recreation Professional

Sports Marketing Specialist

Community Center Director

Corporate Fitness Leader

Director of Stadium Operations

Director of Ticket Operations

Professional Sports Scout

Promotion Director

Youth Programs Director

Campus Recreation Director

Athletic Contract Manager

Sports Camp Director

Co-Curricular Activities

In order to enhance the educational, experiential, networking and professional opportunities for our students, sport and recreation management (SRM) offers and encourages involvement in a wide variety of co-curricular activities and SRM-related conferences and organizations. Co-curricular activities also include required practicum and internship experiences for which academic credit is given. Below is a list of SRMs most prominent activities:

Conferences and Events

Sports Events Marketing Experience (SEME)

Sports Industry Networking and Career Conference (SINC)

MIT Sloan Analytics Conference

National Intramural Recreational Sports Association (NIRSA) Annual Conference and Recreational Sports Expo

National Recreation and Parks Association (NRPA) National Conference
Association of Outdoor Recreation Education Annual Conference

Professional Organizations

National Intramural Recreational Sports Association (NIRSA)

National Recreation and Parks Association (NRPA)

North American Society for Sport Management (NASSM)

North American Society for the Sociology of Sport (NASSS)

Association of Outdoor Recreation and Education

Society of Health and Physical Educators (SHAPE; formerly American Alliance for Health, Physical Education, Recreation and Dance)

Sport Marketing Association (SMA)

JMU Clubs and Organizations

Phi Epsilon Kappa

Sigma Rho Mu

SRM Major's Club (SLAM)

Women in Sport and Recreation Management

Sports Clubs

Practicums and Internships

SRM requires its students to complete a practicum and an internship. Both count as academic credit hours. These are opportunities for the student to gain valuable experience by working in his/her field of choice in a sport or recreation-related agency. The opportunities are almost endless.

While enrolled in SRM 482, students may only take one additional course (three or four credit hours). The additional course must be approved in advance by the site supervisor and the director of SRM.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement (in addition to General Education)	3
Scientific literacy requirement (in addition to General Education)	3-4
Sport and Recreation Management required courses	36
Sport and Recreation Management elective courses	9
General Business Minor for Sport and Recreation Management OR Entrepreneurship Minor ²	18
University Electives	9-10
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² Successful completion of these courses with a 2.0 GPA will qualify the student for a general business minor; however, it is the responsibility of the student to complete the necessary paperwork in the College of Business to apply for the minor.

Major Requirements

Required Courses

SRM 202. Foundations of Leadership in Sport and Recreation Management **Credits: 3.00**

SRM 240. Sport and Recreation Management Seminar **Credits: 3.00**

SRM 241. Introduction to Sport and Recreation Management **Credits: 3.00**

SRM 242. Sociology and Psychology of Sport and Recreation **Credits: 3.00**

SRM 282. Practicum in Sport and Recreation **Credits: 3.00**

SRM 333. Management in Sport and Recreation **Credits: 3.00**

SRM 337. Programming and Assessment in Sport and Recreation Management **Credits: 3.00**

SRM 434. Ethical and Legal Issues in Sport and Recreation Management **Credits: 3.00**

SRM 435. Sport Marketing and Sales **Credits: 3.00**

SRM 436. Facilities and Event Management **Credits: 3.00**

SRM 482. Internship in Sport and Recreation Management **Credits: 6.00**

Major Requirements Total: 36 Credit Hours

Elective Courses

Any nine credit hours of Sport & Recreation Management (SRM) courses at the 300 or 400 level that are not required for the SRM major may be used to satisfy the elective requirement; or any nine credit hours in the Sport Communication or Coaching Education minor may be used to satisfy the nine elective hour requirement in SRM; or any course with permission of a Hart School adviser.

Electives Total: 9 Credit Hours

Minor Requirements

General Business Minor or Entrepreneurship Minor

No more than 30 credit hours may be taken in the College of Business. Students in sport and recreation management must declare either the business or entrepreneurship minor through the College of Business.

General Business Minor Courses

This is one option of two available minors for SRM majors.

CIS 204. Computer Information Systems Fundamentals for Non-Business Majors **Credits: 3.00**

ACTG 244. Accounting for Non-Business Majors **Credits: 3.00** ¹

ECON 201. Introduction to Microeconomics **Credits: 3.00**

FIN 345. Finance Fundamentals for Non-Business Majors **Credits: 3.00**

MGT 305. Organizational Behavior and Human Resource Management **Credits: 3.00**

MKTG 380. Principles of Marketing **Credits: 3.00**

Total: 18 Credit Hours

Footnote

¹ Successful completion of COB 242 will substitute for ACTG 244.

Entrepreneurship Minor Courses

This is one option of two available minors for SRM majors.

ACTG 244. Accounting for Non-Business Majors **Credits: 3.00** ¹
FIN 345. Finance Fundamentals for Non-Business Majors **Credits: 3.00**
MGT 310. Business Fundamentals for Entrepreneurs **Credits: 3.00**
MGT 320. Management of Innovation and Technology **Credits: 3.00**
MGT 471. Entrepreneurship and Small Business Management **Credits: 3.00**
MGT 472. New Venture Creation **Credits: 3.00**

Total: 18 Credit Hours

Footnote

¹ Successful completion of COB 242 will substitute for ACTG 244.

Recommended Schedule for Majors

First Year

General Education **Credits: 15.00**
Cluster One **Credits: 9.00**
SRM 202. Foundations of Leadership in Sport and Recreation Management **Credits: 3.00**
SRM 240. Sport and Recreation Management Seminar **Credits: 3.00**

Total: 30 Credit Hours

Second Year

General Education and/or university electives **Credits: 15.00**
SRM 241. Introduction to Sport and Recreation Management **Credits: 3.00**
SRM 242. Sociology and Psychology of Sport and Recreation **Credits: 3.00**
SRM 282. Practicum in Sport and Recreation **Credits: 3.00**
CIS 204. Computer Information Systems Fundamentals for Non-Business Majors **Credits: 3.00**
ECON 201. Introduction to Microeconomics **Credits: 3.00**

Total: 30 Credit Hours

Third Year

General Education and University Electives **Credits: 12.00**
SRM 333. Management in Sport and Recreation **Credits: 3.00**
SRM 337. Programming and Assessment in Sport and Recreation Management **Credits: 3.00**
Quantitative Requirement **Credits: 3.00**
Required Major Elective **Credits: 3.00**
Selection of two (2) minor courses **Credits: 6.00**

Total: 30 Credit Hours

Fourth Year

University Electives or Scientific Literacy Requirement **Credits: 3.00**
SRM 434. Ethical and Legal Issues in Sport and Recreation Management **Credits: 3.00**
SRM 435. Sport Marketing and Sales **Credits: 3.00**
SRM 436. Facilities and Event Management **Credits: 3.00**
SRM 482. Internship in Sport and Recreation Management **Credits: 6.00**
Select two (2) minor courses **Credits: 6.00**
Required Major Electives **Credits: 6.00**

Total: 30 Credit Hours

Program Total: 120 Credit Hours

Department of Health Professions

Kirk Armstrong, **Academic Unit Head**

Phone: (540) 568-7658
Email: healthprofessions@jmu.edu
Location: Health and Behavioral Studies, Room 3092
Website: <http://healthprof.jmu.edu>

Professors

J. Akers, K. Armstrong, J. Frye, P. Maxwell, A. Temple, D. Torisky

Associate Professors

A. Abad-Jorge, A. Dengo-Flores, R. Dorne, J. Goetschius, M. Hesse, K. Liskey, S. Maiewski, C. Peterson, W. Simmons, A. Skelly, G. Weniger, J. Walsh

Assistant Professors

J. Bonham, A. Massey, T. Newman, A. Russell Yun

Lecturers

K. Harrison

Instructors

J. Ginnity

Mission

As the Department of Health Professions, we engage students, faculty and the community through education, service and scholarship to produce highly qualified healthcare professionals and leaders.

Vision

To be nationally recognized for innovative practices in education, leadership, scholarship and service to produce leaders in the dynamic healthcare industry.

Career Opportunities

Athletic Trainer (Graduate Program)
Registered Dietitian/Nutritionist
Health Administrator
Occupational Therapist (Graduate Program)
Physician Assistant (Graduate Program)

Co-curricular Organizations

Madison Athletic Training Student Association
Health Administration Student Association
JMU Dietetic Association
JMU Physician Assistant Student Society
JMU Student Occupational Therapy Association
Pre-Occupational Therapy Association
Pre-Physical Therapy Society
Pre-Physician Assistant Club
Coalition of Occupational Therapy Advocates for Diversity

Degree Offerings

The Department of Health Professions offers the following degrees:

Bachelor of Science in Dietetics
Bachelor of Science in Health Services Administration
Master of Science in Athletic Training
Master of Occupational Therapy
Master of Physician Assistant Studies

Special Admission Requirements

Admission to JMU does not guarantee admission to all academic majors and minors. Special applications are required for admission to the upper-level courses of the dietetics program and the health services administration program. Please check program websites for application timelines and deadlines. More information about admission requirements can be found on the program pages listed below:

Dietetics, B.S.

Program Description

Students completing the Bachelor of Science in Dietetics are prepared for careers in nutrition and dietetics, including areas of clinical, community, food service, and research. The Dietetics program at James Madison University is a Didactic Program in Dietetics (DPD) that is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics, 120 S. Riverside Plaza, Suite 2190, Chicago, IL 60606-6995, (312) 899-4876. Those seeking to earn the Registered Dietitian Nutritionist (RDN) credential upon graduation must complete an ACEND-accredited graduate program or dietetic internship paired with a graduate degree to be eligible for the national registration exam.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement (in addition to General Education)	3
Scientific Literacy requirement (in addition to General Education) ²	3-4
Prerequisite requirements (listed below) for admission to the major ¹	20 [11]
<i>[7 credits are counted in General Education and 4 credits are counted in Scientific Literacy]</i>	
Foundational courses [16 credits counted in General Education]	[16]
Dietetics major requirements (listed below)	60
University electives	3-4
Total	120

Footnotes

¹The **General Education program** contains a set of requirements each student must fulfill. Many of the General Education requirements may be fulfilled through courses that are listed as prerequisite and foundational courses for major.

²The scientific literacy requirement is met by courses required in the major.

Special Admission Requirements and Program Prerequisite Courses

Any student admitted to JMU can declare dietetics as his/her major and will be permitted to enroll in NUTR 280. Nutrition for Wellness and NUTR 295. Foundations of Nutrition Practice. However, to make progress in the major beyond the first few courses students need to apply and be admitted to the professional program.

Students wishing to be admitted to the dietetics program at JMU must apply in the spring semester during which admission requirements will be met by February 15, usually the sophomore year.

Students applying for admission must have a cumulative GPA of at least 2.7 in the following courses, with a minimum grade of "C-" in each course.

BIO 270. Human Physiology [C3NS] **Credits: 3.00** ¹ and
BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00** ¹
CHEM 131. General Chemistry I [C3PP] **Credits: 3.00** ¹ and
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00** ¹
CHEM 132. General Chemistry II **Credits: 3.00** and
CHEM 132L. General Chemistry Laboratory **Credits: 1.00**
HTH 210. Medical Terminology **Credits: 3.00**

NUTR 280. Nutrition for Wellness **Credits: 3.00**
NUTR 295. Foundations of Nutrition Practice **Credits: 2.00**

Total: 20 Credit Hours

Footnote

¹May also fulfill General Education or B.S. degree requirements.

Foundational Courses

The following courses also fulfill General Education requirements:

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00** ¹
PSYC 101. General Psychology [C5SD] **Credits: 3.00** ¹
or
PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00** ¹
HIST 225. U.S. History [C4AE] **Credits: 4.00** ¹
or
POSC 225. U.S. Government [C4AE] **Credits: 4.00** ¹
SCOM 121. Fundamental Human Communication: Presentations [C1HC] **Credits: 3.00** ¹
or
SCOM 122. Fundamental Human Communication: Individual Presentations [C1HC]
Credits: 3.00 ¹
or
SCOM 123. Fundamental Human Communication: Group Presentations [C1HC] **Credits:**
3.00 ¹
WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00** ¹

Total: 16 Credit Hours

Footnote

¹ May also fulfill General Education or B.S. degree requirements.

Retention and Receiving Didactic Program in Dietetics Verification

To remain in the major, students must maintain a minimum GPA of 2.8 in the major, earn a minimum grade of "C-" in all NUTR and HTH courses. Transfer credit will not be accepted for the following courses: NUTR 363, NUTR 446, NUTR 482 and NUTR 484. Students must earn minimum grades of "C-" in all NUTR and HTH courses and pass program core knowledge assessments in order to receive a verification statement.

Major Requirements

Dietetics Required Courses

BIO 245. General Microbiology **Credits: 3.00** ¹ and
BIO 245L. General Microbiology Laboratory **Credits: 1.00** ¹
BIO 290. Human Anatomy **Credits: 3.00** and
BIO 290L. Human Anatomy Laboratory **Credits: 1.00**
CHEM 241. Organic Chemistry I **Credits: 3.00** ¹ and

CHEM 241L. Concepts of Organic Chemistry Laboratory **Credits: 1.00** ¹
CHEM 260. Concepts of Biochemistry **Credits: 3.00** ¹ and
CHEM 260L. Concepts of Biochemistry Laboratory **Credits: 1.00** ¹
HTH 354. U.S. and Global Health Care Systems **Credits: 3.00**
IPE 415. Ethical Decision-Making in Healthcare: an Interprofessional Approach **Credits:**
1.00
NUTR 340. Science of Food Preparation **Credits: 3.00**
NUTR 350. Emerging Research in Nutrition and Dietetics **Credits: 3.00**
NUTR 360. Management in Dietetics **Credits: 3.00**
NUTR 363. Quantity Food Production **Credits: 4.00**
NUTR 380. Global Nutrition **Credits: 3.00**
NUTR 384. Clinical Nutrition I **Credits: 3.00**
NUTR 385. Nutrition Throughout the Life Cycle **Credits: 3.00**
NUTR 446. Experimental Foods **Credits: 3.00**
NUTR 482. Nutrition and Metabolism **Credits: 3.00**
NUTR 484. Clinical Nutrition II **Credits: 3.00**
NUTR 485. Community Nutrition **Credits: 3.00**
NUTR 486. Counseling Skills for Dietetics **Credits: 3.00**
NUTR 495. Senior Seminar in Dietetics **Credits: 3.00**

Major Requirements Total: 60 Credit Hours

Recommended Schedule for Majors

First Year

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
NUTR 295. Foundations of Nutrition Practice **Credits: 2.00**
PSYC 101. General Psychology [C5SD] **Credits: 3.00** ¹
or
PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00** ¹
Quantitative requirement (B.S. degree requirement) **3 Credit Hours**
WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**
Cluster 1 - Critical Thinking (any course in Cluster 1 Critical Thinking area)
Cluster 1 - Communication (any course in Cluster 1 Communication area)
General Education courses **Credits: 9.00**

Total: 27 Credit Hours

Second Year

BIO 270. Human Physiology [C3NS] **Credits: 3.00** ¹ and
BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**
CHEM 132. General Chemistry II **Credits: 3.00** ¹
CHEM 132L. General Chemistry Laboratory **Credits: 1.00** ¹
HTH 210. Medical Terminology **Credits: 3.00**
POSC 225. U.S. Government [C4AE] **Credits: 4.00** ¹
MATH 220. Elementary Statistics [C3QR] **Credits: 3.00** ¹
NUTR 280. Nutrition for Wellness **Credits: 3.00**
General Education courses **Credits: 9.00**

Total: 30 Credit Hours

Third Year*

CHEM 241. Organic Chemistry I **Credits: 3.00**
CHEM 241L. Concepts of Organic Chemistry Laboratory **Credits: 1.00**
CHEM 260. Concepts of Biochemistry **Credits: 3.00**
CHEM 260L. Concepts of Biochemistry Laboratory **Credits: 1.00**
HTH 354. U.S. and Global Health Care Systems **Credits: 3.00**
NUTR 340. Science of Food Preparation **Credits: 3.00**
NUTR 350. Emerging Research in Nutrition and Dietetics **Credits: 3.00**
NUTR 360. Management in Dietetics **Credits: 3.00**
NUTR 363. Quantity Food Production **Credits: 4.00**
NUTR 380. Global Nutrition **Credits: 3.00**
NUTR 384. Clinical Nutrition I **Credits: 3.00**
NUTR 385. Nutrition Throughout the Life Cycle **Credits: 3.00**
University Elective **Credits: 3.00**

Total: 33 Credit Hours

Fourth Year*

BIO 245. General Microbiology **Credits: 3.00 and**
BIO 245L. General Microbiology Laboratory **Credits: 1.00**
BIO 290. Human Anatomy **Credits: 3.00 and**
BIO 290L. Human Anatomy Laboratory **Credits: 1.00**
IPE 415. Ethical Decision-Making in Healthcare: an Interprofessional Approach **Credits: 1.00**
NUTR 446. Experimental Foods **Credits: 3.00**
NUTR 482. Nutrition and Metabolism **Credits: 3.00**
NUTR 484. Clinical Nutrition II **Credits: 3.00**
NUTR 485. Community Nutrition **Credits: 3.00**
NUTR 486. Counseling Skills for Dietetics **Credits: 3.00**
NUTR 495. Senior Seminar in Dietetics **Credits: 3.00**
Electives **Credits: 3.00**

Total: 30 Credit Hours

Footnotes

¹ These courses may count for both General Education and the major depending on General Education course choice.

*NUTR courses in Years 3 and 4 are offered only one semester per year with the exception of NUTR 380.

Program Total: 120 Credit Hours

Health Services Administration, B.S.

Program Description

The program in health services administration prepares students for entry-level administrative positions and staff positions requiring administrative skills in various health organizations including hospitals, hospital systems, managed

care organizations, retirement and long-term care facilities, ambulatory care organizations, physician practices and public health facilities. In addition, the program provides the foundation for graduate study in health administration and related fields. The health services administration program is approved as a Full Certified undergraduate program by the Association of University Programs in Health Administration (AUPHA)

Deadline for Change or Declaration of Majors

Any student admitted to JMU can declare Health Services Administration as his/her major and enroll in prerequisite courses. However, to progress in the major beyond the prerequisite courses, students must apply and be admitted to the program.

Students wishing to be admitted to the health services administration program at JMU may apply in the spring of their sophomore year or upon completion of the prerequisite courses. Applications are due September 15 for spring semester admission or February 15 for fall semester admission. Specific application requirements may be found on the health services administration program website (<http://healthprof.jmu.edu/hsa/>)

Degree and Major Requirements

The Department of Health Professions offers the following degrees: Bachelor of Science in Dietetics, B.S., Bachelor of Science in Health Services Administration, Master of Science in Athletic Training, Master of Occupational Therapy and Master of Physician Assistant Studies.

Degree Requirements	Credit Hours
General Education ¹	40
Quantitative requirement (in addition to General Education)	3
Scientific Literacy requirement (in addition to General Education)	3
Major requirements	74
Total	120

Footnote

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

Major Requirements

Upon completion of all JMU and program requirements, the student is awarded the B.S. in Health Services Administration.

No more than 30 hours may be taken in the College of Business.

Minimum Grades

Any student admitted to JMU can declare health services administration as his/her major and enroll in prerequisite courses. However, to progress in the major beyond the prerequisite courses, students must apply and be admitted to

the program. To be eligible to apply, students must have completed or be enrolled in the following prerequisite courses at the time of application and receive a minimum grade of "C-":

CIS 204. Computer Information Systems Fundamentals for Non-Business Majors **Credits: 3.00**

ECON 201. Introduction to Microeconomics **Credits: 3.00**

HTH 354. U.S. and Global Health Care Systems **Credits: 3.00**

Recommended Schedule for Majors

First Year

General Education courses **Credits: 31.00**

Total: 31 Credit Hours

Second Year

CIS 204. Computer Information Systems Fundamentals for Non-Business Majors **Credits: 3.00**

ECON 201. Introduction to Microeconomics **Credits: 3.00**

HTH 354. U.S. and Global Health Care Systems **Credits: 3.00**

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

General Education courses **Credits: 9.00**

Electives **Credits: 7.00**

Total: 28 Credit Hours

Third Year

ACTG 244. Accounting for Non-Business Majors **Credits: 3.00**

FIN 345. Finance Fundamentals for Non-Business Majors **Credits: 3.00**

HTH 320. Statistical Methods for Health Science Research **Credits: 3.00** (*B.S. degree requirement*)

HSA 358. Health Services Administration Cornerstone **Credits: 3.00**

HSA 365. Healthcare Ethics and the Law **Credits: 3.00**

HSA 385. Professional Development Seminar **Credits: 1.00**

HTH 210. Medical Terminology **Credits: 3.00**

HTH 231. Population Health Determinants **Credits: 3.00**

MGT 305. Organizational Behavior and Human Resource Management **Credits: 3.00**

MKTG 380. Principles of Marketing **Credits: 3.00**

General electives **Credits: 3.00**

Total: 31 Credit Hours

Fourth Year

HTH 450. Epidemiology **Credits: 3.00**

HSA 363. Health Economics **Credits: 3.00** ²

HSA 366. Health Politics and Policy **Credits: 3.00** ³

HSA 452. Hospital Organization and Administration **Credits: 3.00**

HSA 454. Internship in Health Organizations **Credits: 3.00**

HSA 455. Long Term Care Organization and Administration **Credits: 3.00** ²

HSA 456. Principles of Ambulatory Care Operations **Credits: 3.00** (*B.S. degree requirement*) ²

HSA 463. Healthcare Quality Management and Analytics **Credits: 3.00** ³

HSA 464. Healthcare Finance **Credits: 3.00** ³

HSA 480. Health Services Administration Capstone **Credits: 3.00**

Total: 30 Credit Hours

Footnotes

² Offered only in fall semester.

³ Offered only in spring semester.

Department of Health Sciences

Catherine Zeman, **Department Head**

Phone: (540) 568-6510

Location: Health and Behavioral Studies, Room 3091

Website: <http://www.healthsci.jmu.edu>

Professors

S. Baller, A. Burnett, T. Enyeart Smith, K. Lewis, A. Peachey

Associate Professors

D. Henry, L. Merrell, K. Ott Walter, D. Sutton

Assistant Professors

A. Coleman, I. Fratila, S. Grossman, T. Jehi, R. Khan, J. Lassiter, M. Lovesky, B. Mendenhall

Senior Lecturers

T. Howley

Lecturers

L. Lemons, A. Mhaskar, C. Smith, S. Wilson

Instructors

L. Blosser, A. Gheen

Mission Statement

Through education, scholarship and service we enhance the health and well-being of individuals and populations.

Goals

The goals of the Department of Health Sciences are to:

Educate future health professionals through inclusive and engaging learning environments.

Provide professional service infused with equity and diversity to the department, college, university and global community.

Conduct, disseminate and publish cutting-edge research/scholarships in health sciences.

Contribute to the health and well-being of the JMU community.

Support the General Education program at JMU.

Co-curricular Organizations

Eta Sigma Gamma (Health Sciences Honor Society)

Phi Epsilon Kappa

Pre-Med Association

Pre-Occupational Therapy Association

Pre-Physical Therapy Society

Pre-Physician Assistant Club

Special Admission Requirements

Admission to JMU does not guarantee admission to all academic majors and minors.

Deadline for Change or Declaration of Majors

Deadlines for change or declaration of major forms are:

Semester	Deadline
Summer	February 15
Fall	February 15
Spring	September 15 of the previous year

Change of major requests received after the deadline will be processed the following semester. Students changing their major to health sciences after February 15 of the sophomore year should expect an additional semester(s) to complete the program. The number of additional semesters required to complete the program will depend on the timing of the change to health sciences and the number of summer courses completed.

Assessment

Graduating majors must participate in Health Sciences senior assessment activities. Assessment information helps the faculty modify the curriculum to meet student needs.

Degree Offered

The Department of Health Sciences offers the Bachelor of Science degree.

Credit by Examination

The Department of Health Sciences offers credit by examination for a limited number of the courses taught in the department. Students who want permission to take an examination must apply to the department head during the regular registration period. Students will receive details regarding approval and examination dates after they apply. Examinations will be given only in courses offered during the semester.

Health Sciences Major; B.S. degree option

Program Description

The B.S. degree with a major in health sciences consists of health science course requirements in addition to General Education requirements and B.S. requirements.

The health sciences major is designed for students interested in understanding the causes of disease, strategies for promoting wellness, and the scientific basis and methodologies for analysis of health concerns. The major combines a broad foundation of health-related course work with a choice of preparatory courses suitable for entry into graduate programs in medicine, dentistry, optometry, occupational therapy, physical therapy, pharmacy, public health, physician assistant studies, athletic training and veterinary medicine.

All students pursuing the health sciences major must complete the following core courses:

Major Requirements

CHEM 120. Concepts of Chemistry [C3PP] **Credits: 3.00**

or

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00 and**

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

or

CHEM 132. General Chemistry II **Credits: 3.00 and**

CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

HTH 100. Personal Wellness [C5W] **Credits: 3.00**

HTH 150. Introduction to Health Sciences **Credits: 2.00**

HTH 210. Medical Terminology **Credits: 3.00**

HTH 231. Population Health Determinants **Credits: 3.00**

HTH 245. Foundations of Infectious Disease **Credits: 3.00**

HTH 255. Chronic Disease and Disabilities **Credits: 3.00**

HTH 320. Statistical Methods for Health Science Research **Credits: 3.00**

HTH 351. Health Behavior Change **Credits: 3.00**

HTH 354. U.S. and Global Health Care Systems **Credits: 3.00**

HTH 408. Health Research Methods **Credits: 3.00**

HTH 423. Ethics and Critical Thinking in Health **Credits: 3.00**

HTH 450. Epidemiology **Credits: 3.00**

Select 16 Credits:

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

BIO 150. Foundations of Biology II **Credits: 3.00 and**

BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

BIO 240. Genetics **Credits: 3.00 and**

BIO 240L. Genetics Laboratory **Credits: 1.00**

BIO 245. General Microbiology **Credits: 3.00¹ and**

BIO 245L. General Microbiology Laboratory **Credits: 1.00¹**

BIO 324. Human Genetics **Credits: 3.00**
 BIO 370. Animal Physiology **Credits: 4.00**
 CHEM 241. Organic Chemistry I **Credits: 3.00 and**
 CHEM 241L. Concepts of Organic Chemistry Laboratory **Credits: 1.00**
 CHEM 242. Organic Chemistry II **Credits: 3.00 and**
 CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**
 CHEM 260. Concepts of Biochemistry **Credits: 3.00**
 HTH 352. Environmental Health **Credits: 3.00**
 HTH 380. Health Communication **Credits: 3.00**
 HTH 422. Public Health and Healthcare Policy **Credits: 3.00**
 HTH 441. Biomechanics for the Healthcare Professional **Credits: 3.00**
 HTH 458. Health Program Planning and Evaluation **Credits: 3.00**
 KIN 302. Exercise Physiology **Credits: 3.00² and**
 KIN 302L. Exercise Physiology Laboratory **Credits: 1.00²**
 NUTR 280. Nutrition for Wellness **Credits: 3.00**
 PHYS 140. College Physics I [C3PP] **Credits: 3.00 and**
 PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**
 PHYS 150. College Physics II **Credits: 3.00 and**
 PHYS 150L. General Physics Laboratory **Credits: 1.00**
 PSYC 101. General Psychology [C5SD] **Credits: 3.00**
 PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**
 PSYC 250. Introduction to Abnormal Psychology **Credits: 3.00³**

Select 8 Credits:

BIO 245. General Microbiology **Credits: 3.00 and**
 BIO 245L. General Microbiology Laboratory **Credits: 1.00**
 BIO 270. Human Physiology [C3NS] **Credits: 3.00 and**
 BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**
 BIO 290. Human Anatomy **Credits: 3.00 and**
 BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

Total: 65-66 Credit Hours

Footnotes

¹ Will not count for the 16 credits in this category unless also taking BIO 270/BIO 270L and BIO 290/BIO 290L.

² Pre-Athletic Training minors only.

³ Pre-Occupational Therapy, Pre-Physical Therapy or Pre-Physician Assistant minors only.

Recommended Schedule for Majors

First Year

HTH 100. Personal Wellness [C5W] **Credits: 3.00**
 MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**
 HTH 150. Introduction to Health Sciences **Credits: 2.00**
 2-3 courses from Select 16 **Credits: 7.00 - 11.00**
 General Education courses **Credits: 15.00 - 18.00**

Total: 30-34 Credit Hours

Second Year

CHEM 120. Concepts of Chemistry [C3PP] **Credits: 3.00**
 or
 CHEM 131. General Chemistry I [C3PP] **Credits: 3.00 and**
 CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
 or
 CHEM 132. General Chemistry II **Credits: 3.00 and**
 CHEM 132L. General Chemistry Laboratory **Credits: 1.00**
 HTH 210. Medical Terminology **Credits: 3.00**
 HTH 231. Population Health Determinants **Credits: 3.00**
 HTH 245. Foundations of Infectious Disease **Credits: 3.00**
 HTH 255. Chronic Disease and Disabilities **Credits: 3.00**
 General Education courses and electives **Credits: 8.00 - 16.00**

Choose one of the following sets: 4 Credit Hours

BIO 245. General Microbiology **Credits: 3.00 and**
 BIO 245L. General Microbiology Laboratory **Credits: 1.00**
 BIO 270. Human Physiology [C3NS] **Credits: 3.00 and**
 BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**
 BIO 290. Human Anatomy **Credits: 3.00 and**
 BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

Total: 30 Credit Hours

Third Year

HTH 320. Statistical Methods for Health Science Research **Credits: 3.00**
 HTH 351. Health Behavior Change **Credits: 3.00**
 HTH 354. U.S. and Global Health Care Systems **Credits: 3.00**
 General Education, select 16 courses and electives **Credits: 13.00 - 17.00**

Choose one of the following sets: 4 Credit Hours

BIO 245. General Microbiology **Credits: 3.00 and**
 BIO 245L. General Microbiology Laboratory **Credits: 1.00**
 BIO 270. Human Physiology [C3NS] **Credits: 3.00 and**
 BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**
 BIO 290. Human Anatomy **Credits: 3.00 and**
 BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

Total: 26-30 Credit Hours

Fourth Year

HTH 408. Health Research Methods **Credits: 3.00**
 HTH 423. Ethics and Critical Thinking in Health **Credits: 3.00**
 HTH 450. Epidemiology **Credits: 3.00**
 General Education, pre-professional courses and electives **Credits: 21.00**

Total: 30 Credit Hours

Program Total: 120 Credit Hours

Department of History

P. David Dillard, **Interim Department Head**

Phone: (540) 568-6132

Email: history@jmu.edu

Location: Wilson Hall 3032

Website: <http://jmu.edu/history>

Professors

K. Borg, P. Dillard, M. Gubser, M. Hametz, S. M. Hanifi, K. Hardwick, G. Lanier, F. Montoya, M. Mulrooney, D. Owusu-Ansah, S. Reich, M. Seth

Associate Professors

R. Brannon, J. Davidson, C. Davis, T. Fitzgerald, E. Friss, M. Gayne, P. Herrington, Y. Hu, K. McCleary, A. Sandman, W. Van Norman, E. Westkaemper, A. Witmer

Assistant Professors

N. Amin, E. Carrara, E. Dinka, T. Gonzalez, J. Jones, C. Moore

Mission

We regard history as an ever-evolving discipline based on the rigorous collection and critical analysis of evidence to explore the diversity of human experiences over time. As historians, we narrate the past by interpreting our sources, advancing informed perspectives on past social, political and cultural realities, while also providing essential contextual knowledge for the present. By teaching students how to interrogate the historical record, evaluate arguments based on the strength of the evidence and communicate complex ideas effectively, we prepare students to become discerning, productive and knowledgeable participants in a global society.

Inside the Classroom

Students of history will become well-rounded and engaged citizens by:

Acquiring knowledge of the human condition through the study of political, cultural and social experiences of people around the world
Learning the historical contexts of major political, intellectual, social, economic, religious and environmental events and transformations
Understanding the major cultural developments in fine and popular arts in societies around the world in their historical contexts
Discerning how people from a variety of societies hold differing values, ethics, and legal concepts and comprehending how these ideas relate to each other and to Western ideas and values
Students of history will gain the following skills

Reading, writing and speaking effectively and critically
Making informed judgments based on existing evidence
Locating printed and online information to research a topic exhaustively
Critically evaluating textual evidence by identifying its thesis, sources, conclusions, perspective, bias and reliability

Beyond the Classroom

While at JMU, students of history will bring the insights and skills they learn in the classroom to their relationship and experiences with their broader communities.

Possibilities for such interactions include:

Leading efforts to promote open dialogue, civic engagement and public service.
Fostering interdisciplinary relationships by engaging with the larger scholarly community at the university.
Participating in partnerships and events that expand and challenge their own worldview.
Studying abroad to deepen their understanding of cultural differences and non-US historical perspectives and experiences.
Becoming involved in professional work through internships.

Career Opportunities

Students graduating with a major or minor in history leave JMU with skills that are sought after by a wide range of employers. History graduates are adaptive learners and able project managers. As a result, they are particularly marketable in a world where professions change rapidly. Some of the career paths that history majors follow include:

Advertising
Archives and Libraries
Business
Communication
Digital humanities
Education
Government
Information Management
Journalism
Law
Non-Profit and Non-Governmental Organizations
Project Management
Public History and Museums
Public Policy
Research
Teaching
Writing and Editing
Undergraduate work in history is also a successful foundation for advanced degrees in the humanities, law, the social sciences, medicine and other disciplines.

Co-curricular Activities and Organizations

Phi Alpha Theta (National Honor Society for History)
The Madison Historians

Cross Disciplinary Minors

Students majoring or minoring in history might consider adding a cross-disciplinary minor. The programs below are supported by history faculty and include courses that can be double-counted in the history major or minor. For more information, refer to cross-disciplinary Minors.

- African, African American and Diaspora Studies Minor
- American Studies Minor
- Asian Studies Minor
- Classical Studies Minor
- Environmental Humanities Minor
- Historical Archaeology Minor
- Latin American, Latinx and Caribbean Studies Minor
- Medieval and Renaissance Studies Minor
- Middle Eastern Communities and Migrations Minor
- Russian Studies Minor
- Science, Technology and Society Minor
- Women's, Gender and Sexuality Studies Minor

History, B.A.

Program Description

History courses introduce students to the way historians think and use evidence. The 100- and 200-level courses serve both general education and history majors with an overview of how to approach history. 300-level courses allow majors and interested non-majors to dive into historical thinking and argumentation through courses highlighting different themes and areas of the world. 400-level courses offer capstone-guided research experience intended for majors and experienced history students.

The requirements for a major in history consist of introductory and upper-level courses. All courses introduce students to the nature of history. In addition to involving reading, writing and critical thinking, these courses help students develop skills in using historical thinking and conducting research and interpretation for the 21st-century world. Majors in history are strongly encouraged to continue study in foreign languages beyond the minimum university requirement and, when appropriate, to integrate their foreign language studies into their history classes.

The major requires five core courses. The first two introductory courses include HIST 101. World History to 1500 [C2HQC] and HIST 102. World History Since 1500 [C2HQC]. HIST 225 is the final introductory course. HIST 300 is a required course in research methods and thinking about how to do history. Entering majors should take HIST 300 as soon as possible. HIST 299 helps students to gain knowledge and confidence to translate academic learning to the post-college workforce.

All majors take a 300-level course that emphasizes the "big picture" of global history and the way ideas spread across space and time. All majors also take a 300-level course that applies historical thinking to today's world and to skills outside the classroom. This can include internships, courses that use the dedicated History Studio and courses that delve into the archives. Students may choose from the list of courses that meet these requirements.

Majors also complete two capstone courses at the 400- level that offer opportunities to develop and share their own historical interpretations with a wider audience. For students writing a senior honors thesis, only three hours of HIST 499 may be counted among the two 400-level courses required for the major.

Majors must also take five elective courses: two on the 400-level, and three open electives at the 300- and 400-levels. Students may elect a major concentration of either public history or teacher education. A concentration is not required. Students who elect a concentration must fulfill all the specific requirements for those programs.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) [requirement for B.A. degree] ²	0-14
Philosophy course (in addition to General Education courses) [requirement for B.A. degree]	3
Major requirements	35-47
University electives	15-41
Total	120

Footnotes

¹ The **General Education** program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the **Department of Foreign Languages, Literatures and Cultures' placement test**.

Major Requirements

Core Requirements: 14 Credit Hours

- HIST 101. World History to 1500 [C2HQC] **Credits: 3.00**
- HIST 102. World History Since 1500 [C2HQC] **Credits: 3.00**
- HIST 225. U.S. History [C4AE] **Credits: 4.00**
- HIST 299. Putting History Skills to Work **Credits: 1.00**
- HIST 300. Historical Thinking **Credits: 3.00**

Choose One Option

History Majors (No Concentration Option): 21 Credit Hours

These are requirements outside the core for upper-level courses.

Connected History - Choose One: 3 Credit Hours

The Connected history requirement offers classes that think historically about big-picture issues in a global context. Classes might consider regions or the globe. These classes guide students in how to use historical inquiry to

understand deep connections and cause and effect relationships across time and place. We intend this to be world history in its broadest sense.

HIST 307. The Trans-Atlantic Slave Trade **Credits: 3.00**

HIST 314. Plagues, Saints and Empires: The World before 1500 **Credits: 3.00**

HIST 315. Global History of Sport **Credits: 3.00**

HIST 353. International and Multicultural Histories of the Modern Middle East **Credits: 3.00**

HIST 318. Our Better Angels?: The World History of Violence **Credits: 3.00**

HIST 334. A Global History of Nationalism **Credits: 3.00**

HIST 365. Topics in Connected History **Credits: 3.00**

HIST 368. Blurred Borders: A Cultural History of the Caribbean, Latin America and the United States **Credits: 3.00**

HIST 373. History of the Ottoman Empire, 1453-1922 **Credits: 3.00**

Applying History - Choose One: 3 Credit Hours

Applying history classes move beyond the confines of the traditional classroom. These classes apply historical thinking and historical source-based evidence in real world settings. These can take different forms. Internships are an option here. So are classes that focus on acquiring and applying digital and technological skills, or on using history to think about public policy. Others guide students in archival research either online or in an in-person archive. Many study abroad classes also fulfill these goals.

HIST 302. Plazas, Protests and Processions: An Urban History of the Americas **Credits: 3.00**

HIST 322. Jim Crow South **Credits: 3.00**

HIST 335. Topics in Applying History **Credits: 3.00**

HIST 340. Internship in History **Credits: 3.00**

HIST 343. History of Today **Credits: 3.00**

HIST 345. Pills and Potions: Histories of U.S. Health Care and Medicine **Credits: 3.00**

HIST 351. War in Afghanistan: Local and Global Perspectives **Credits: 3.00**

HIST 357. Fates of Empires **Credits: 3.00**

HIST 358. Modern Africa, ca. 1800-1990s **Credits: 3.00**

HIST 360. Research Apprenticeship in History **Credits: 3.00**

HIST 362. American Material Religion **Credits: 3.00**

HIST 374. The Southern Plantation: Race, Space and Gender in an American Landscape **Credits: 3.00**

HIST 396. History Beyond the Classroom: Public History **Credits: 3.00**

Research Capstone Requirement: 6 Credit Hours

Majors need to take two courses at the 400-level. These courses are designed to offer all students guided research experiences. Students may choose any two courses they wish at this level.

Elective Courses: 9 Credit Hours

Students need to take three additional elective courses chosen from 300- and 400-level courses. Students have free choice of these elective courses. Students may not double-count courses that meet other specific requirements in history. In other words, students could choose to take two different courses that meet the connected history requirement. One would count toward the connected history requirement and the other would count as an elective course for the major. HIST 300 and HIST 391 do not count toward this requirement.

Total: 35 Credit Hours

Concentrations

History Majors (Concentration Option): 21-33 Credit Hours

Choose one of the concentrations below:

History Teacher Education Concentration

History Teacher Education Concentration Courses: 21-24 Credit Hours

Do you want to teach history in a middle or high school setting? A history major is good preparation for a professional path in social studies education which allows students to combine a passion for history with a clear professional path. Students may choose between a four-year program and a five-year program that lead to preparation for teacher licensure. The five-year program (including a pre-professional secondary education minor and interdisciplinary social science (ISS) minor, and then application and acceptance to an M.A.T. program in the fifth year) allows students to extend and deepen their historical knowledge and skill at historical thinking, while learning to apply it in field experiences. The four-year program (a double major in secondary education and history, with a minor in ISS) provides an accelerated program for motivated students to get into the classroom sooner.

Students interested in teaching licensure must also complete the ISS minor and either the Secondary Education major or the Secondary Education minor.

Students who take POSC 457 cannot also take or receive credit for HIST 357.

Pre-professional secondary education minors (5-year program) should ordinarily take POSC 457 for the ISS minor and therefore not receive credit for HIST 357. If they do take HIST 357 instead (with prior permission), it cannot double-count for the major and ISS minor.

Secondary Education majors (four-year program): HIST 357 can double-count with the ISS minor.

Choose one. Thinking with Economics: 3 Credit Hours

HIST 333. Maps, Money, Manufacture and Trade **Credits: 3.00**

HIST 469. A History of International Development in the Twentieth Century **Credits: 3.00**

or another economic history class approved by adviser **Credits: 3.00**

Choose one. Virginia history requirement: 3 Credit Hours

HIST 303. Virginia's Place in #VastEarlyAmerica **Credits: 3.00**

HIST 350. Virginia **Credits: 3.00**

Connected History - Choose One: 3 Credit Hours

The Connected history requirement offers classes that think historically about big-picture issues in a global context. Classes might consider regions or the globe. These classes guide students in how to use historical inquiry to understand deep connections and cause and effect relationships across time and place. We intend this to be world history in its broadest sense.

HIST 307. The Trans-Atlantic Slave Trade **Credits: 3.00**

HIST 314. Plagues, Saints and Empires: The World before 1500 **Credits: 3.00**

HIST 353. International and Multicultural Histories of the Modern Middle East **Credits: 3.00**

HIST 318. Our Better Angels?: The World History of Violence **Credits: 3.00**

HIST 334. A Global History of Nationalism **Credits: 3.00**

HIST 365. Topics in Connected History **Credits: 3.00**

HIST 315. Global History of Sport **Credits: 3.00**

HIST 368. Blurred Borders: A Cultural History of the Caribbean, Latin America and the United States **Credits: 3.00**

HIST 373. History of the Ottoman Empire, 1453-1922 **Credits: 3.00**

HIST 396. History Beyond the Classroom: Public History **Credits: 3.00**

Applying History Requirement for Teacher Education - Choose One: 3 Credit Hours

Applying history classes move beyond the confines of the traditional classroom. These classes apply historical thinking and historical source-based evidence in real world settings. Students in the history teacher education program should consider choosing courses that apply history in K-12 classrooms. HIST 357 concentrates on thinking through K-12 pedagogies.

For students in the 4-year history teacher education program, HIST 357 double-counts for a similar requirement in the ISS minor.

HIST 302. Plazas, Protests and Processions: An Urban History of the Americas **Credits: 3.00**

HIST 322. Jim Crow South **Credits: 3.00**

HIST 335. Topics in Applying History **Credits: 3.00**

HIST 340. Internship in History **Credits: 3.00**

HIST 343. History of Today **Credits: 3.00**

HIST 345. Pills and Potions: Histories of U.S. Health Care and Medicine **Credits: 3.00**

HIST 351. War in Afghanistan: Local and Global Perspectives **Credits: 3.00**

HIST 357. Fates of Empires **Credits: 3.00**

HIST 358. Modern Africa, ca. 1800-1990s **Credits: 3.00**

HIST 360. Research Apprenticeship in History **Credits: 3.00**

HIST 362. American Material Religion **Credits: 3.00**

HIST 374. The Southern Plantation: Race, Space and Gender in an American Landscape **Credits: 3.00**

HIST 396. History Beyond the Classroom: Public History **Credits: 3.00**

Research Capstone Requirement: 6 Credit Hours

Majors need to take two courses at the 400-level. These courses are designed to offer all students guided research experiences. Students may choose any two courses they wish at this level.

Elective Courses: 3-6 Credit Hours

Students need to take one elective course chosen from 300- and 400-level courses. Students have free choice of that elective course. Students may generally not double-count courses that meet other specific requirements in history.

Students may double-count a course toward the Thinking with Economics requirement and another requirement if the course is approved for both requirements. In that instance, students will then need to complete one additional elective history course at the 300- or 400-level to complete the required credit hours in the major.

HIST 300 and HIST 391 do not count toward this requirement.

History Teacher Education Concentration Total: 35-38 Credit Hours

Public History Concentration

Public History Concentration Courses: 27-33 Credit Hours

Historians today practice their discipline in a variety of careers as well as in more traditional academic settings. Those historians who work in museums, archives, government agencies, libraries, historic preservation organizations, businesses, contract history firms, cultural resource management firms and historic sites are known as public historians because they use their skills as historians to serve a public audience. The concentration in Public History trains students in the broad range of skills and issues associated with public history while providing them with a solid general background in history.

Students pursuing the public history concentration augment their foundation of traditional history courses by taking introductory and specialized public history courses and completing a semester-long internship. History majors opting to pursue the public history concentration will complete all history requirements and additional courses designed to train students in public history.

Students are required to complete two public history core courses as well as meeting all history department requirements. Two of the three elective courses should be chosen from the list of primary electives; the remaining elective course may be chosen from either the primary or secondary list of elective courses.

Centering Public History Requirement: 3 Credit Hours

HIST 396. History Beyond the Classroom: Public History **Credits: 3.00**

Connected History: 3 Credit Hours

The Connected history requirement offers classes that think historically about big-picture issues in a global context. Classes might consider regions or the globe. These classes guide students in how to use historical inquiry to understand deep connections and cause and effect relationships across time and place. We intend this to be world history in its broadest sense.

HIST 307. The Trans-Atlantic Slave Trade **Credits: 3.00**

HIST 314. Plagues, Saints and Empires: The World before 1500 **Credits: 3.00**

HIST 315. Global History of Sport **Credits: 3.00**

HIST 353. International and Multicultural Histories of the Modern Middle East **Credits: 3.00**

HIST 318. Our Better Angels?: The World History of Violence **Credits: 3.00**

HIST 334. A Global History of Nationalism **Credits: 3.00**

HIST 365. Topics in Connected History **Credits: 3.00**

HIST 368. Blurred Borders: A Cultural History of the Caribbean, Latin America and the United States **Credits: 3.00**

HIST 373. History of the Ottoman Empire, 1453-1922 **Credits: 3.00**

Applying History Requirement for Public History: 3 Credit Hours

All students planning to graduate with a concentration in public history need to complete an approved internship. This internship counts as the applying history requirement.

HIST 340. Internship in History **Credits: 3.00**

Public History Primary Courses: 6-9 Credit Hours

Students need to take two or three courses from this list of approved public history courses. Students who take two of these courses also need to complete one course from the secondary public history list. Students who complete three of these courses do not need to take a course from the public history secondary list.

HIST 331. Historical Archaeology **Credits: 3.00**

HIST 394. Introduction to Museum Work **Credits: 3.00**

HIST 407. Digital History **Credits: 3.00**

HIST 438. Workshop in Public and Local History **Credits: 3.00**

HIST 440. The History Museum **Credits: 3.00**

HIST 441. Oral History **Credits: 3.00**

HIST 492. History From Things: Material Culture **Credits: 3.00**

HIST 493. Historic Preservation **Credits: 3.00**

Public History Secondary Courses: 0-3 Credit Hours

Students either take three courses from the Public History primary courses list or two from that list and one from this Public History secondary list. Between the two requirements, students must take 9 credit hours without double-counting a course.

HIST 326. How Cars Changed Everything **Credits: 3.00**

HIST 327. Makers, Users, Skeptics and Thieves: Americans and Their Technologies **Credits: 3.00**

HIST 338. U.S. Urban History **Credits: 3.00**

HIST 360. Research Apprenticeship in History **Credits: 3.00**

HIST 391. Travel Studies Seminar **Credits: 3.00** (Summer in Ghana Program or Travel Studies Seminar: Paris and Normandy: Civilization, Culture, and Memory: North of England Programme)

HIST 402. Workshop in Colonial American Life **Credits: 3.00**

HIST 403. Workshop in Civil War Virginia **Credits: 3.00**

HIST 406. Monticello **Credits: 3.00**

HIST 408. The Museum: Histories and Controversies **Credits: 3.00**

HIST 452. Parks and Recreation: History of National Parks **Credits: 3.00**

ANTH 494. Field Techniques in Archaeology **Credits: 4.00 - 8.00**

Research Capstone Requirement: 6 Credit Hours

Majors need to take two courses at the 400 level. These courses are designed to offer all students a guided research experiences. Students may choose any two courses they wish at this level.

Elective Courses for Public History Students: 3-9 Credit Hours

Students need to take one elective course at the 300 or 400 level in addition to the other requirements for this program. Students have free selection of that course from any 300 or 400 level course in the major.

In the event that a student takes a course that meets both the public history primary or secondary course requirement and the research capstone requirement, the student will take an additional elective history course at the 300 or 400 level to complete the required credit hours. Any 300 or 400 level course in history meets this requirement.

HIST 300 and HIST 391 do not count toward this requirement.

Public History Concentration Total 41-47 Credit Hours

Major Requirements Total: 35-47 Credit Hours

Recommended Schedule for Majors

Recommended Schedule for Majors without a Specific Concentration

(Non- History Teacher Education Concentration)

First Year

HIST 101. World History to 1500 [C2HQC] **Credits: 3.00**

HIST 102. World History Since 1500 [C2HQC] **Credits: 3.00**

HIST 225. U.S. History [C4AE] **Credits: 4.00**

Foreign language courses **Credits: 6.00 - 8.00**

General Education courses **Credits: 3.00**

General Education **Cluster One: Skills for the 21st Century Credits: 9.00**

Total: 28-30 Credit Hours

Second Year

We encourage majors to begin taking 300 level courses in the major in their second year after completing General Education courses, but waiting until the third year to begin taking 400 level courses in the major.

HIST 300. Historical Thinking **Credits: 3.00** (Students are encouraged to take HIST 300 by the end of the second year.)

Foreign language courses (if needed) or electives **Credits: 9.00 - 10.00**

General Education courses **Credits: 9.00 - 12.00**

University Electives **Credits: 6.00 - 9.00**

Total: 30-31 Credit Hours

Third Year

Philosophy course **Credits: 3.00**

History electives (mix 300 and 400 levels) **Credits: 9.00**

Electives **Credits: 6.00**

General Education courses (Cluster Four) **Credits: 3.00**

General Education courses (Cluster Two, Cluster Four) **Credits: 9.00**

Total: 30 Credit Hours

Fourth Year

HIST 299. Putting History Skills to Work **Credits: 1.00**

Electives **Credits: 20.00 -21.00**

History electives (mix 300 and 400 levels) **Credits: 9.00**

Total: 30-31 Credit Hours

Recommended Schedule for the Major with History Teacher Education Concentration

A more detailed recommendation for combining the majors and minors leading to licensure can be found on the History department website.

First Year

Students who have a double-major in which the other major is a BS degree may be subject to the BS degree requirements instead, which do not include a foreign language. Be sure to talk to your advisor.

HIST 101. World History to 1500 [C2HQC] **Credits: 3.00**

HIST 102. World History Since 1500 [C2HQC] **Credits: 3.00**

HIST 225. U.S. History [C4AE] **Credits: 4.00**

Foreign language courses are required IF doing the B.A. degree. **Credits: 6.00 - 8.00**

General Education courses **Credits: 3.00**

General Education Cluster One: Skills for the 21st Century Credits: 9.00

Total: 28-30 Credit Hours

Second Year

HIST 303. Virginia's Place in #VastEarlyAmerica **Credits: 3.00**

or

HIST 350. Virginia **Credits: 3.00**

HIST 333. Maps, Money, Manufacture and Trade **Credits: 3.00**

Foreign language courses (if needed) or electives **Credits: 9.00 - 10.00**

General Education courses (Cluster Three, Cluster Five) **Credits: 12.00**

We encourage majors to begin taking 300 level courses in the major in their second year after completing General Education courses, but waiting until the third year to begin taking 400 level courses in the major.

HIST 300. Historical Thinking **Credits: 3.00** (*Students are encouraged to take HIST 300 by the end of their second year.*)

Total: 30-31 Credit Hours

Third Year

HIST 357. Fates of Empires **Credits: 3.00** HIST 357 students in the 4-year program [students in 5-year program should take POSC 457 fall of senior year]

Philosophy course **Credits: 3.00**

History electives (mix 300 and 400 levels) **Credits: 9.00**

Electives **Credits: 6.00**

General Education courses (Cluster Two, Cluster Four) **Credits: 9.00**

Total: 30 Credit Hours

Fourth Year

History electives (mix 300 and 400 levels) **Credits: 9.00**

Electives **Credits: 21.00**

Student teaching for students in the 4-year program

HIST 299. Putting History Skills to Work **Credits: 1.00**

Total: 31 Credit Hours

Program Total: 120 Credit Hours

History Teaching Licensure

Teaching Licensure

Students interested in becoming secondary social studies teachers have their choice of a 5-year program (with MAT) or a 4-year program. Either can be done with the history major, choosing the teacher education concentration, an Interdisciplinary Social Sciences (ISS) minor, and either a major in secondary education (4-year program) or a minor in pre-professional secondary education (4-year program).

Students in this program must also be admitted to the College of Education. It is critical that students seeking licensure consult regularly with their education adviser, their ISS adviser, and their major adviser to support their progression through the programs. For a full description of the requirements see the **teaching history section of the history department website.**

School of Integrated Sciences

Stephanie Stockwell, **Co-Director**

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Location: EnGeo 2122

Website: <https://www.jmu.edu/sis/>

Professors

K. Altaii, C. Bachmann, M. Bentley, Z. Bortolot, R. Brent, C. J. Brodrick-Hartman, J. Coffman, S. Frysinger, A. Goodall, N. Hendrickson, M. Kimsey, C. Klevickis, R. Kolvoord, H. Kraenzle, S. Marrin, D. McGraw, J. Miles, C. Nash, M. Papadakis, R. Raab, A. Sanson, J. Spindel, J. Tang, A. Teate, W. Teel, L. Thomas, M. Afzal Upal, H. Way

Associate Professors

D. Bonsal, S. Conley, O. Danzell, J. Davis, R. MacDonald, G. Murton, R. Simmons, S. Stockwell, X. Wei, E. York, K. Yurco, H. Zhang

Assistant Professors

P. Baxter, M. Bayrakci Boz, T. Gerken, W. Hu, C. Li, G. Pili, J. Robinson, X. Tang, R. Zaini

Visiting Assistant Professors

K. Metta, N. Plachta, J. Stoltzfus

Instructors

P. Henriksen

Cross Disciplinary Major and Minor Programs

ISAT participates in several cross disciplinary programs. These include a major in biotechnology and minors in

Environmental Information Systems Minor

Environmental Management Minor

Environmental Science Minor

Environmental Studies Minor

Materials Science Minor

Science, Technology and Society Minor

Urban and Regional Studies Minor

Geography

Director: Zachary Bortolot

Phone: (540) 568-6343

Email: bortolozj@jmu.edu

Website: www.jmu.edu/gs

Adviser: Kimberly Robinson

Phone: (540) 568-6199

Email: robinsks@jmu.edu

Location: EnGeo 2108

Mission

The Geography Program empowers, inspires and motivates students to become competent critical thinkers who will prepare for lifelong learning, respond to intellectual challenges with interest, excitement and competence, and see themselves as global citizens actively involved in the world around them. The geography program prepares students who are confident in their abilities as geographers. Graduates have the skills to make a professional contribution to the field, and to compete in graduate programs and the job market. They are highly qualified for careers in research and development and are equipped for long-term success as professionals in the field of geography.

Through the study of geography, students will:

Understand and properly use the terminology and concepts that are central to the discipline of geography, and explain how these concepts evolved over time.

Effectively use appropriate geospatial technologies to address questions about human interactions within the built and natural environments.

Be productive participants in research efforts aimed at measuring, describing, analyzing and explaining the underlying processes giving rise to geographic phenomena.

Work effectively in multidisciplinary teams.

Evaluate human-environment interactions from a holistic point of view that addresses geographic, as well as political, social, economic and ethical factors affecting those interactions.

Demonstrate civic responsibility and appreciation for cultural and physical diversity from local to global scales.

Career Opportunities

Geography majors achieve career success in many areas. Recent graduates have become environmental scientists and specialists, geographic information scientists and technologists, urban and regional planners, international development specialists, geospatial intelligence analysts, forest and wildlife managers and conservationists, and climatologists and meteorologists.

Co-curricular Activities and Organizations

American Society for Photogrammetry and Remote Sensing

Geography Club

Gama Theta Upsilon (International Geographical Honor Society)

U.S. Geospatial Intelligence Foundation accredited Geospatial Intelligence Certificate Program

Integrated Science and Technology

Director: Christopher Bachmann

Phone: (540) 568-2735

Email: bachmacg@jmu.edu

Coordinator for Students: Paul W. Henriksen

Phone: (540) 568-2755

Email: henrikpw@jmu.edu

Location: King 321

Website: <http://www.isat.jmu.edu>

Mission Statement

The Integrated Science and Technology Bachelors Program prepares graduates to excel in a complex technological world. Our curriculum empowers students to provide globally responsible multi-disciplinary solutions to important problems with sensitivity to social and ethical complexities.

The foundational concepts of the ISAT program, which distinguishes it from other science- and technology-based programs, is its integration of multiple disciplines by focusing on problem-solving and systems thinking. The unique integrative character of the program is carried by the curriculum content, pedagogy and departmental culture.

Goals

We measure our success by achieving the following goals.

ISAT graduates will be able to do the following:

- Apply and integrate mathematics, physical science, biological science and technology.
- Apply sound experimental methodology.
- Understand the professional requirements for the acquisition and use of information and data.
- Work effectively in multidisciplinary teams.
- Solve technological problems and understand their societal implications.
- Understand and apply the principles of professional ethics.
- Communicate effectively on social, scientific and technical matters.
- Analyze science and technology within broader global, political, economic and social contexts.
- Become autonomous, self-directed learners who recognize the need for lifelong learning.
- Use the computer as an effective problem-solving tool.
- Examine a problem and assemble the tools and knowledge needed to solve it.

Career Opportunities

The ISAT program prepares students for an agile professional career. ISAT graduates are technological problem solvers, clear and confident communicators, and experienced collaborators. This combination of hard and soft skills provides a framework for success in a wide variety of rapidly changing fields. Examples include careers in data science and machine learning, renewable energy, remote sensing, technical and operational consulting, research and development, regulation and policy, advanced manufacturing, and environmental management.

The majority of ISAT students are employed in the public or private sectors following graduation. Some graduates pursue advanced degrees in areas such as nanotechnology, materials science, system dynamics, engineering, business, sustainability, computer science and public policy.

The flexibility of the ISAT program allows students to select courses that inspire and strategically prepare them for the careers or graduate programs of their choice.

Co-curricular Activities and Organizations

ISAT Honor Society (IHS)
Environmental Management, JMU Student Chapter of Air and Waste Management Association

Association for Facilities Engineering, JMU Student Chapter
Virginia Biotechnology Association (VaBio), JMU Student Chapter
Society of Automotive Engineers International, JMU Student Chapter
IEEE Computer Society, JMU Student Chapter
Armed Force Communications and Electronics Association (AFCEA), JMU Student Chapter
American Wind Energy Association, JMU Student Chapter
Collaboration for Environment, Health and Safety (CEHS)

Program Accreditation

The ISAT Bachelor's degree program is accredited by the Applied Science Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

Intelligence Analysis

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Website: <http://www.jmu.edu/ia>

Adviser: Kimberly Robinson
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Email: robinsks@jmu.edu
Location: EnGeo 2108

Mission Statement

The Bachelor of Science degree in Intelligence Analysis provides a multi-disciplinary education for students who seek careers as analysts, with a specialization in intelligence analysis. The degree integrates knowledge from a variety of academic disciplines (philosophy, history, political science, technology, business) and combines that with professionally oriented knowledge and skills. Students learn innovative ways to structure their thinking to assess complex real-world problems, along with how technology can be employed to acquire data, evaluate that data, and communicate it effectively to others.

Career Opportunities

IA students can find employment in an array of government agencies (both civilian and military), federal contracting and consulting firms, select U.S. and multinational corporations, and state and local law enforcement.

Admission to Intelligence Analysis

Information on admission to the major may be found on the individual program page: Intelligence Analysis, B.S.

Integrated Science and Technology, B.S.

Program Description

The Bachelor of Science degree in Integrated Science and Technology produces a graduate broadly acquainted with basic science, technology and

social science. All students pursue a common program through their sophomore year that provides a foundation of science and an introduction to its technology applications. Studies are integrated and include mathematics, statistics, physics, chemistry, biology, knowledge-based systems, environmental science, modern production, energy, and the role of science and technology in society. During their junior and senior years, all students pursue deeper study of strategically significant areas that include applied biotechnology, energy, environment and sustainability, industrial and manufacturing systems, and applied computing. Each student selects a concentration in any of these areas and pursues additional study in the concentration culminating in a capstone project. Students rely heavily upon the computer as a problem-solving tool throughout the curriculum, work in teams extensively and engage in laboratory experiences in the requisite sciences.

Minimum Grades

A minimum grade of "C-" is required for ISAT 151, ISAT 152 and ISAT 251.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Major requirements (listed below) ²	66-67
Concentration requirements (listed below)	12
University electives Total	0-1 120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within the major.

² ISAT major requirements include the quantitative and scientific literacy requirements of the B.S. degree.

Major Requirements

First Year Student and Sophomore Courses

Issues in Science and Technology: 14 Credit Hours

This sequence of four courses (ISAT 112, ISAT 113/ISAT 113L, ISAT 211, and ISAT 212) engages students in the practice of science, both to motivate and to provide understanding of science and technology in the context of important current social issues. Current areas from which issues are selected are living systems, the environment, modern production and energy.

ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**
ISAT 113. Biotechnology Issues in Science and Technology [C3NS] **Credits: 3.00 and**

ISAT 113L. Biotechnology Issues in Science and Technology Laboratory [C3L] **Credits: 1.00**

ISAT 211. Issues in Modern Production Systems **Credits: 3.00**

ISAT 212. Energy Issues in Science and Technology **Credits: 3.00**

Analytical Methods: 17 Credit Hours

This sequence of five courses (ISAT 151, ISAT 152, ISAT 251, ISAT 252, and ISAT 300) provides students with basic methods and tools for understanding and analyzing problems in science and technology. Subjects are taught in an integrated manner with applications as the unifying factor. Topics include calculus, elements of the physical sciences, statistics, project management, the computer, knowledge-based systems, and instrumentation and measurement. ISAT 300 is usually taken in the third year.

ISAT 151. Topics in Applied Calculus in ISAT [C3QR] **Credits: 4.00**

ISAT 152. Topics in Applied Physics in ISAT **Credits: 4.00**

ISAT 251. Topics in Applied Statistics in ISAT [C3QR] **Credits: 3.00**

ISAT 252. Programming and Problem Solving **Credits: 3.00**

ISAT 300. Applied Computing, Instrumentation and Measurement **Credits: 3.00**

Social Context of Technology and Science: 6 Credit Hours

This two-course sequence introduces the student to the broader issues encountered in science and technology problem-solving, particularly social, ethical, economic and legal issues.

ISAT 171. Governance of Sociotechnical Systems **Credits: 3.00**

ISAT 271. Technology, Science and Society **Credits: 3.00**

Junior and Senior Courses

Holistic Problem Solving: 10 Credit Hours

This four-course sequence introduces the students to holistic problem solving and has them study a complex problem in an area of technology.

ISAT 190. Introduction to Holistic Problem Solving in the ISAT Major **Credits: 1.00**

ISAT 290. Introduction to Systems Thinking for Complex Problems **Credits: 3.00**

ISAT 390. Holistic Problem-Solving Workshop I **Credits: 3.00**

ISAT 391. Holistic Problem-Solving Workshop 2 **Credits: 3.00**

Strategic Sectors in Science and Technology: 13-14 Credit Hours

Students complete instruction in strategic sectors during their junior year. Students must choose two of the sectors and complete the full sector sequence for each of the two. The strategic sectors, developed from national critical technologies lists, represent areas of current strategic importance in the world economy.

The current areas for the sectors are:

Applied Biotechnology

Applied Computing

Energy

Environment and Sustainability

Industrial and Manufacturing systems

These are the same topic areas as for the concentrations in ISAT. Sector level classes are 300 level and concentration classes are 400 level.

Applied Biotechnology

ISAT 305. Instrumentation and Measurement in Biotechnology (0, 2) **Credits: 1.00**

ISAT 350. Biotechnology for the New Millennium I **Credits: 3.00**

ISAT 351. Biotechnology for the New Millennium II **Credits: 3.00**

Applied Computing

ISAT 340. Database Design, Implementation and Management **Credits: 3.00**

ISAT 341. Machine Learning and Data Science **Credits: 3.00**

Energy

ISAT 301. Instrumentation and Measurement in Energy (0, 2) **Credits: 1.00**

ISAT 310. Energy Fundamentals I **Credits: 3.00**

ISAT 311. Role of Energy in Modern Society **Credits: 3.00**

Environment and Sustainability

ISAT 320. Fundamentals of Environmental Science and Technology I **Credits: 4.00**

ISAT 321. Fundamentals of Environmental Science and Technology II **Credits: 3.00**

Industrial and Manufacturing systems

ISAT 303. Production Systems Automation Lab **Credits: 1.00**

ISAT 330. Sustainable Manufacturing Systems **Credits: 3.00**

ISAT 331. Cyber-Physical Industry **Credits: 3.00**

Senior Capstone Project: 6 Credit Hours

Students take the last senior project class and the rest of their four concentration classes.

ISAT 490. Capstone Experience I **Credits: 1.00**

ISAT 491. Senior Capstone Project I **Credits: 1.00**

ISAT 492. Senior Capstone Project II **Credits: 2.00**

ISAT 493. Senior Capstone Project III **Credits: 2.00**

Concentration Requirements: 12 Credit Hours

Students are provided the opportunity to focus their program of study by taking four additional courses in a particular area of concentration. This area should align with one of the strategic sectors completed in the junior year. The current areas for a concentration are:

Applied Biotechnology

Applied Computing

Energy

Environment and Sustainability

Industrial and Manufacturing Systems

Public Interest Technology and Science co-concentration

Tailored concentration*

*Students also have the option to tailor their area of concentration with the help of their adviser and the approval of the ISAT program director.

Concentrations

The courses listed below may be taken to fulfill concentration requirements. If you wish to substitute other courses, you must obtain Concentration Adviser approval. Four courses (twelve credit hours) are required in addition to your senior project for a single concentration.

Applied Biotechnology Concentration

Choose 12 credit hours from the following course options:

ISAT 451. Biotechnology in Industry and Agriculture **Credits: 3.00**

ISAT 452. Medical Biotechnology **Credits: 3.00**

ISAT 454. Computer Applications in Biotechnology **Credits: 3.00**

ISAT 455. Regulatory Issues Biotechnology **Credits: 3.00**

ISAT 456. Ethical, Legal and Social Implications of Biotechnology **Credits: 3.00** (Fall and Spring)

ISAT 459. Awareness and Understanding of Chemical, Biological, and Radiological Weapons of Mass Destruction **Credits: 3.00** (Spring)

ISAT 485. Gender Issues in Science **Credits: 3.00**

Applied Computing Concentration

Choose 12 credit hours from the following course options:

ISAT 440. Cultural, Ethical, Legal and Social Issues in Computing **Credits: 3.00**

ISAT 441. Simulation and Modeling **Credits: 3.00**

ISAT 445. Software Engineering and Agile Development **Credits: 3.00**

ISAT 447. Interaction Design **Credits: 3.00**

ISAT 449. Emerging Topics in Applied Data Science **Credits: 3.00**

Energy Concentration

Required Energy Concentration Courses: 6 Credit Hours

ISAT 411. Energy Economics and Policy **Credits: 3.00** (Fall)

ISAT 413. Options for Energy Efficiency **Credits: 3.00** (Fall)

Energy Concentration Electives: 6 Credit Hours

ISAT 410. Sustainable Energy Development **Credits: 3.00** (Spring)

ISAT 414. Energy Fundamentals II **Credits: 3.00** (Spring)

ISAT 416. International Energy Studies **Credits: 3.00** (only abroad in summer)

Environment and Sustainability Concentration

Choose 12 credit hours from the following course options:

ISAT 420. Environmental Analysis and Modeling **Credits: 3.00** (Spring)
ISAT 421. Environmental Policy & Regulation **Credits: 3.00** (Spring)
ISAT 422. Industrial Environmental Management **Credits: 3.00** (Fall)
ISAT 423. Environmental Remediation **Credits: 3.00** (Fall)
ISAT 424. Natural Resource Management **Credits: 3.00** (Fall)
ISAT 425. Environmental Hydrology **Credits: 3.00** (Spring)
ISAT 426. Environmental Information Systems **Credits: 3.00**¹ (Spring and Summer)
ISAT 427. Industrial Hygiene **Credits: 3.00** (Spring)
ISAT 428. Industrial Ecology **Credits: 3.00** (Spring and Summer)
ISAT 429. Sustainability: An Ecological Perspective **Credits: 3.00** (Spring)
ISAT 473. Local Agriculture and Farm Internships **Credits: 4.00** (Fall)
ISAT 474. Political Ecology **Credits: 3.00**

Industrial and Manufacturing Systems Concentration

Choose 12 credit hours from the following course options:

ISAT 430. Materials and Manufacturing Processes **Credits: 3.00** (Fall)
ISAT 431. Advanced Manufacturing Processes and Systems **Credits: 3.00** (Spring)
ISAT 432. Materials Selection in Product Design **Credits: 3.00** (Spring)
ISAT 433. Foundations of Lean and Six Sigma **Credits: 3.00** (Fall)
ISAT 434. Industrial Informatics **Credits: 3.00** (Fall)
ISAT 435. Lean Six Sigma Applications **Credits: 3.00** (Spring)
ISAT 437. Technological Innovation and Sustainable Design **Credits: 3.00** (Spring)

Public Interest Technology and Science Co-concentration

Students who select this concentration must also choose an additional concentration. Choose 12 credit hours from the following course options:

ISAT 411. Energy Economics and Policy **Credits: 3.00**
ISAT 421. Environmental Policy & Regulation **Credits: 3.00**
ISAT 440. Cultural, Ethical, Legal and Social Issues in Computing **Credits: 3.00**
ISAT 455. Regulatory Issues Biotechnology **Credits: 3.00**
ISAT 456. Ethical, Legal and Social Implications of Biotechnology **Credits: 3.00**
ISAT 485. Gender Issues in Science **Credits: 3.00**
ISAT 483. Topics in Science, Technology and Society **Credits: 3.00**
ISAT 487. Science, Technology and Society Futures Laboratory **Credits: 1.00 - 3.00**

Tailored Concentration

Students have the option to tailor their area of concentration with the help of their adviser and the approval of the ISAT program director.

Footnote

¹ EIS minors only

Recommended Schedule for Majors

First Year

Fall Semester

ISAT 113. Biotechnology Issues in Science and Technology [C3NS] **Credits: 3.00 and**
ISAT 113L. Biotechnology Issues in Science and Technology Laboratory [C3L] **Credits:**
1.00
ISAT 151. Topics in Applied Calculus in ISAT [C3QR] **Credits: 4.00**
ISAT 190. Introduction to Holistic Problem Solving in the ISAT Major **Credits: 1.00**
General Education / University Electives **Credits / Units: 6.00**

Total: 15 Credit Hours

Spring Semester

ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**
ISAT 152. Topics in Applied Physics in ISAT **Credits: 4.00**
ISAT 171. Governance of Sociotechnical Systems **Credits: 3.00**
General Education / University Electives **Credits / Units: 4.00**

Total: 15 Credit Hours

Second Year

Fall Semester

ISAT 212. Energy Issues in Science and Technology **Credits: 3.00**
ISAT 251. Topics in Applied Statistics in ISAT [C3QR] **Credits: 3.00**
ISAT 271. Technology, Science and Society **Credits: 3.00**
General Education / University Electives **Credits / Units: 6.00**

Total: 15 Credit Hours

Spring Semester

ISAT 211. Issues in Modern Production Systems **Credits: 3.00**
ISAT 252. Programming and Problem Solving **Credits: 3.00**
ISAT 290. Introduction to Systems Thinking for Complex Problems **Credits: 3.00**
General Education / University Electives **Credits / Units: 6.00**

Total: 15 Credit Hours

Third Year

Fall Semester

ISAT Strategic Sector I **3 Credit Hours**
ISAT Strategic Sector I Lab **1 Credit Hour**
ISAT Strategic Sector II **3 Credit Hours**
Credits / Units: 6.00-7.00
ISAT 300. Applied Computing, Instrumentation and Measurement **Credits: 3.00**

ISAT 390. Holistic Problem-Solving Workshop I **Credits:** 3.00
ISAT 490. Capstone Experience I **Credits:** 1.00
General Education / University Electives **Credits / Units:** 1.00-3.00

Total: 14-17 Credit Hours

Spring Semester

ISAT Strategic Sector I 3 *Credit Hours*
ISAT Strategic Sector II 3 *Credit Hours*
ISAT Strategic Sector II Lab 1 *Credit Hour*
ISAT 391. Holistic Problem-Solving Workshop 2 **Credits:** 3.00
ISAT 491. Senior Capstone Project I **Credits:** 1.00
General Education / University Electives **Credits / Units:** 3.00-6.00

Total: 13-17 Credit Hours

Fourth Year

Fall Semester

Students take the third senior project class and on the average two concentration classes.

ISAT 492. Senior Capstone Project II **Credits:** 2.00
ISAT Concentration I 3 *Credit Hours*
ISAT Concentration II 3 *Credit Hours*
Credits / Units: 6.00
General Education / University Electives **Credits / Units:** 7.00

Total: 15 Credit Hours

Spring Semester

Students take the last senior project class and the rest of their four concentration classes.

ISAT 493. Senior Capstone Project III **Credits:** 2.00
ISAT Concentration III 3 *Credit Hours*
ISAT Concentration IV 3 *Credit Hours*
Credits / Units: 6.00
General Education / University Electives **Credits / Units:** 7.00

Total: 15 Credit Hours

Program Total: 120 Credit Hours

Integrated Science and Technology Major with Pre-health Preparation

Students majoring in ISAT desiring to prepare for higher education in health careers (dentistry, optometry, medicine, pharmacy, physical therapy, veterinary) may waive some required ISAT courses if they take equivalent courses required by the pre-health programs.

These equivalencies are not generally granted outside of a pre-health preparation program. Students who begin a preparation but do not finish it may be able to have some of the courses waived. Contact Paul Henriksen, Coordinator for Students, for more information.

Required Courses for Pre-Health	ISAT Courses Waived
BIO 140/BIO 140L, BIO 240/BIO 240L	ISAT 113/ISAT 113L
CHEM 131, CHEM 132	ISAT 112
PHYS (140, 150) or (240, 250)	ISAT 152, ISAT 212
MATH 205, 235 or 231 and 232	ISAT 151
MATH 220	ISAT 251

Geography Minor

Minor Requirements

The minor in geography consists of the following courses for a total of not less than 19 credit hours.

Required Courses

GEOG 210. Physical Geography (2, 2) **Credits:** 4.00
GEOG 215. Introduction to Geographic Information Science and Cartography **Credits:** 3.00
GEOG 280. Human Geography: The Cultural Landscape **Credits:** 3.00
Three additional geography courses 9-12 *Credit Hours*

Total: 19-22 Credit Hours

Integrated Science and Technology Minor

Minor Requirements

The minor in ISAT mirrors the major by having a breadth component and a depth component. The breadth component is satisfied through nine credit hours in Issues in Science and Technology and Instrumentation and Measurement. The depth component is satisfied through focused study in a strategic sector.

Students should note that many courses have ISAT prerequisites that are outside the minor (although equivalents to ISAT prerequisite courses will be accepted). In planning a sequence of courses for the minor, students are encouraged to meet with an ISAT adviser to ensure that all needed prerequisites will be taken in due course. In addition, before a student pursuing an ISAT minor can take any ISAT course, a minimum grade of "C-" is required for all ISAT foundation courses that are prerequisites for another required ISAT foundation course.

The minimum requirements for the minor in ISAT are as follows:

Courses

Choose three courses from the following: 9-10 Credit Hours

ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**

ISAT 113. Biotechnology Issues in Science and Technology [C3NS] **Credits: 3.00**

ISAT 211. Issues in Modern Production Systems **Credits: 3.00**

ISAT 212. Energy Issues in Science and Technology **Credits: 3.00**

ISAT 252. Programming and Problem Solving **Credits: 3.00**

Choose one of the following sequences: 6-7 Credit Hours

Energy: 7 Credit Hours

ISAT 301. Instrumentation and Measurement in Energy (0, 2) **Credits: 1.00**

ISAT 310. Energy Fundamentals I **Credits: 3.00**

ISAT 311. Role of Energy in Modern Society **Credits: 3.00**

Environment and Sustainability: 7 Credit Hours

ISAT 320. Fundamentals of Environmental Science and Technology I **Credits: 4.00**

ISAT 321. Fundamentals of Environmental Science and Technology II **Credits: 3.00**

Industrial and Manufacturing Systems: 6 Credit Hours

ISAT 330. Sustainable Manufacturing Systems **Credits: 3.00**

ISAT 331. Cyber-Physical Industry **Credits: 3.00**

Applied Computing: 6 Credit Hours

ISAT 340. Database Design, Implementation and Management **Credits: 3.00**

ISAT 341. Machine Learning and Data Science **Credits: 3.00**

Applied Biotechnology: 7 Credit Hours

ISAT 305. Instrumentation and Measurement in Biotechnology (0, 2) **Credits: 1.00**

ISAT 350. Biotechnology for the New Millennium I **Credits: 3.00**

ISAT 351. Biotechnology for the New Millennium II **Credits: 3.00**

One additional Integrated Science and Technology course at the 300 or 400 level: 3 Credit Hours

Total: 18-20 Credit Hours

Geography, B.A.

Program Description

Students complete a common core that gives a firm foundation in essential geographical knowledge which includes human geography, physical geography, geospatial techniques, statistics, and human/land relations.

Beyond the core, concentrations encourage a deeper understanding of the discipline and the relevant skills to address critical problems faced by humanity. These concentrations can be customized to the student's interests (Custom) or focus on a particular area within Geography (Applied GIS, Environment, Conservation, Sustainability, and Development).

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course(s) (in addition to General Education courses)	3
Major requirements	46-49
Electives	13-30
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major. ISAT 251 for the math requirement in Cluster Three is strongly recommended, as is GEOG 200 in Cluster Four.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures placement test.

Major Requirements

Minimum Grades

In addition to the geography core courses, students must choose a concentration, listed in the "Concentrations" section. All courses for the major must be taken on a graded basis. Students must earn a minimum grade of "C" in each of the core courses as they are prerequisites to most concentration courses.

GEOG 210. Physical Geography (2, 2) **Credits: 4.00**

GEOG 215. Introduction to Geographic Information Science and Cartography **Credits: 3.00**

GEOG 216. Earth Observation and GPS **Credits: 3.00**

GEOG 280. Human Geography: The Cultural Landscape **Credits: 3.00**

Advanced Sequence GEOG 400-level ^{1, 2} (selected in consultation with the adviser) **Credits: 6.00**

Concentration courses **Credits: 21.00 - 24.00**

Choose One Statistics Course: 3 Credit Hours

ISAT 251. Topics in Applied Statistics in ISAT [C3QR] **Credits: 3.00**

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

Choose One Environment Course: 3 Credit Hours

GEOG 290. Human-Environment Interactions **Credits: 3.00**

GEOG 308. Environment, Nature and Society **Credits: 3.00**

Major Requirements Total: 46-49 Credit Hours

Footnotes

¹ For Honors students, the advanced sequence is GEOG 499 A, B, C.

² Students may opt for a capstone experience that entails three or six hours of independent research (GEOG 490), with the approval of and in close consultation with a project adviser.

Geography Concentrations

Applied Geographic Information Science (AGIS) Concentration

JMU geography graduates with an AGIS concentration are prepared to gain professional employment with government and industry or go on to graduate programs. Public agencies where they find employment include local and regional planning agencies, mapping organizations such as the U.S. Geological Survey, intelligence agencies such as the National Geospatial-Intelligence Agency, and also in the environmental science field with the U.S. Forest Service, the National Park Service, the Environmental Protection Agency and other agencies.

JMU AGIS graduates find opportunities in industry with companies such as ESRI, Maxar, Lockheed, BAE Systems, Booz Allen Hamilton, SAIC, Sanborn and many others.

In addition to the geography core requirements, students in the AGIS concentration must complete the following course work.

GEOG 365. Cartography and Geospatial Visualization **Credits: 3.00**

GEOG 366. Intermediate Geographic Information Science **Credits: 3.00**

GEOG 367. Programming for Geographic Information Science **Credits: 3.00**

GEOG 385. Principles of Remote Sensing **Credits: 3.00**

Choose nine credit hours from the following electives: 9 Credit Hours

Up to one concentration-related course from another program may be used as an elective with the approval of the student's adviser.

GEOG 355. Global Positioning Systems **Credits: 3.00**

GEOG 406. Forest Inventory: A Geospatial Approach **Credits: 3.00**

GEOG 465. Topics in GIS **Credits: 3.00**

GEOG 466. GIS and Geographic Databases **Credits: 3.00**

GEOG 467. GIS Project Management **Credits: 3.00**

GEOG 468. Internet Geographic Information Systems **Credits: 3.00**

GEOG 469. Applications of Geographic Information Systems **Credits: 3.00**

GEOG 485. Processing Remotely Sensed Data **Credits: 3.00**

GEOG 490. Senior Research or Field Practicum **Credits: 3.00**

GEOG 491. International Studies **Credits: 1.00 - 3.00**

GEOG 495. Internship in Geography **Credits: 3.00 - 6.00**

GEOG 497. Independent Study **Credits: 3.00**

AGIS Cognate Course: 3 Credit Hours

GEOG 200. Geography: The Global Dimension [C4GE] **Credits: 3.00**

GEOG 300. Population Geography **Credits: 3.00**

GEOG 301. Introduction to Natural Disasters Response **Credits: 3.00**
or

HUMN 301. Introduction to Natural Disasters Response **Credits: 3.00**

GEOG 310. Environmental Issues **Credits: 1.00 - 4.00**

GEOG 315. Field Studies in Geography **Credits: 3.00**

GEOG 320. Human Dimensions of Global Change **Credits: 3.00**

GEOG 322. Agricultural Systems **Credits: 3.00**

GEOG 323. The Geography of Human Genetics, Infectious Diseases and Diet **Credits: 3.00**

GEOG 325. Environmental Ethics **Credits: 3.00**

GEOG 327. Climatology **Credits: 3.00**

GEOG 329. Global Climate Change **Credits: 3.00**

GEOG 330. Weather, Climate and Society **Credits: 3.00**

GEOG 331. Geography of Virginia **Credits: 3.00**

GEOG 332. Geography of Europe **Credits: 3.00**

GEOG 334. Geography of East and Southeast Asia **Credits: 3.00**

GEOG 335. Geography of Africa **Credits: 3.00**

GEOG 336. Environmental Hazards: A Focus on Southeast Asia **Credits: 3.00**

GEOG 337. Geography of Latin America **Credits: 3.00**

GEOG 338. Geography of the Philippine Islands: Problems and Possibilities **Credits: 3.00**

GEOG 339. Geography of the Caribbean **Credits: 3.00**

GEOG 340. Biogeography **Credits: 3.00**

GEOG 341. Wilderness Techniques **Credits: 3.00**

GEOG 342. Management and Protection of Natural Resources **Credits: 3.00**

GEOG 343. Wildlife Management **Credits: 3.00**

GEOG 344. Globalization and Development **Credits: 3.00**

GEOG 345. Geography of Poverty **Credits: 3.00**

GEOG 348. Indigenous Geographies **Credits: 3.00**

GEOG 350. Topics in Geography **Credits: 1.00 - 3.00**

GEOG 355. Global Positioning Systems **Credits: 3.00**

GEOG 360. GIS for Humanitarian Assistance **Credits: 3.00**
or

HUMN 360. GIS for Humanitarian Assistance **Credits: 3.00**

GEOG 375. Political Geography **Credits: 3.00**

GEOG 376. Urban Geography **Credits: 3.00**

GEOG 377. Feminist Geography **Credits: 3.00**

GEOG 380. Cultural Geography **Credits: 3.00**
GEOG 410. Geography and Film **Credits: 3.00**
GEOG 415. Environment, Landscape and Culture **Credits: 3.00**
GEOG 427. Water Resources of the World **Credits: 3.00**

GEOG 429. Sustainability: An Ecological Perspective **Credits: 3.00**
or
ISAT 429. Sustainability: An Ecological Perspective **Credits: 3.00**

GEOG 440. Advanced Biogeography **Credits: 3.00**
GEOG 447. Climates Through Time **Credits: 3.00**
GEOG 470. Senior Seminar in Environmental Conservation, Sustainability and Development **Credits: 3.00**
GEOG 476. Sustainable Cities Seminar **Credits: 3.00**
GEOG 477. Gendered Geographies **Credits: 3.00**
BIO 402. Forest Ecology **Credits: 4.00**
ISAT 425. Environmental Hydrology **Credits: 3.00**
ISAT 473. Local Agriculture and Farm Internships **Credits: 4.00**
ISAT 474. Political Ecology **Credits: 3.00**

AGIS Concentration Total: 24 Credit Hours

Geography Custom Concentration

Methods Course

In addition to the geography core requirements, students in the customized concentration must complete one of the following methods courses:

GEOG 315. Field Studies in Geography **Credits: 3.00**
GEOG 341. Wilderness Techniques **Credits: 3.00**
GEOG 355. Global Positioning Systems **Credits: 3.00**
GEOG 365. Cartography and Geospatial Visualization **Credits: 3.00**
GEOG 366. Intermediate Geographic Information Science **Credits: 3.00**
GEOG 367. Programming for Geographic Information Science **Credits: 3.00**
GEOG 385. Principles of Remote Sensing **Credits: 3.00**

Declared Pathway

Students will choose from a set of courses, approved by a program adviser, on the basis of how they fit together thematically and support the educational objectives of the geography program. Students must take a minimum of 18 credit hours at the 300 level or above (in addition to the methods course). At least 6 of these credit hours must be at the 400 level or above.

Geography Custom Concentration Total: 21 Credit Hours

Environmental Conservation, Sustainability and Development Concentration

The Environmental Conservation, Sustainability and Development (ECSD) concentration focuses on the geographical contexts within which people and places interact. Required and elective course work allows students to explore spatial and temporal patterning between human communities and the natural

environment at multiple scales. The curriculum addresses global issues such as global climate change and globalization; environment and human interactions including political, economic, physical and ethical factors; human and ecological aspects of sustainable development; natural resource management including energy, forests, wildlife and biodiversity; cultural ecology; regional geography; and population issues.

In addition to the geography core requirements, students in the Environmental Conservation, Sustainability and Development concentration must complete the following course work.

Senior Seminar Course: 3 Credit Hours

Select three credit hours from the following:

GEOG 410. Geography and Film **Credits: 3.00**
GEOG 415. Environment, Landscape and Culture **Credits: 3.00**
GEOG 427. Water Resources of the World **Credits: 3.00**
GEOG 429. Sustainability: An Ecological Perspective **Credits: 3.00**
GEOG 430. Dynamics of the Atmosphere **Credits: 3.00**
GEOG 440. Advanced Biogeography **Credits: 3.00**
GEOG 447. Climates Through Time **Credits: 3.00**
GEOG 470. Senior Seminar in Environmental Conservation, Sustainability and Development **Credits: 3.00**
GEOG 476. Sustainable Cities Seminar **Credits: 3.00**
GEOG 477. Gendered Geographies **Credits: 3.00**
GEOG 491. International Studies **Credits: 1.00 - 3.00**

ECSD Electives: 15 Credit Hours

Select 15 credit hours from the following.

These 300-level courses are identified on the concentration form, which will be reviewed and approved by the student's academic adviser.

In consultation with the academic adviser, a student may select one non-geography course as an elective.

GEOG 200. Geography: The Global Dimension [C4GE] **Credits: 3.00**
GEOG 300. Population Geography **Credits: 3.00**

GEOG 301. Introduction to Natural Disasters Response **Credits: 3.00**
or
HUMN 301. Introduction to Natural Disasters Response **Credits: 3.00**

GEOG 310. Environmental Issues **Credits: 1.00 - 4.00**
GEOG 315. Field Studies in Geography **Credits: 3.00**
GEOG 320. Human Dimensions of Global Change **Credits: 3.00**
GEOG 322. Agricultural Systems **Credits: 3.00**
GEOG 323. The Geography of Human Genetics, Infectious Diseases and Diet **Credits: 3.00**
GEOG 325. Environmental Ethics **Credits: 3.00**
GEOG 327. Climatology **Credits: 3.00**
GEOG 329. Global Climate Change **Credits: 3.00**
GEOG 330. Weather, Climate and Society **Credits: 3.00**
GEOG 331. Geography of Virginia **Credits: 3.00**
GEOG 332. Geography of Europe **Credits: 3.00**

GEOG 334. Geography of East and Southeast Asia **Credits: 3.00**
GEOG 335. Geography of Africa **Credits: 3.00**
GEOG 336. Environmental Hazards: A Focus on Southeast Asia **Credits: 3.00**
GEOG 337. Geography of Latin America **Credits: 3.00**
GEOG 338. Geography of the Philippine Islands: Problems and Possibilities **Credits: 3.00**
GEOG 339. Geography of the Caribbean **Credits: 3.00**
GEOG 340. Biogeography **Credits: 3.00**
GEOG 341. Wilderness Techniques **Credits: 3.00**
GEOG 342. Management and Protection of Natural Resources **Credits: 3.00**
GEOG 343. Wildlife Management **Credits: 3.00**
GEOG 344. Globalization and Development **Credits: 3.00**
GEOG 345. Geography of Poverty **Credits: 3.00**
GEOG 348. Indigenous Geographies **Credits: 3.00**
GEOG 350. Topics in Geography **Credits: 1.00 - 3.00**
GEOG 355. Global Positioning Systems **Credits: 3.00**

GEOG 360. GIS for Humanitarian Assistance **Credits: 3.00**
or
HUMN 360. GIS for Humanitarian Assistance **Credits: 3.00**

GEOG 375. Political Geography **Credits: 3.00**
GEOG 376. Urban Geography **Credits: 3.00**
GEOG 377. Feminist Geography **Credits: 3.00**
GEOG 380. Cultural Geography **Credits: 3.00**
GEOG 406. Forest Inventory: A Geospatial Approach **Credits: 3.00**
GEOG 410. Geography and Film **Credits: 3.00**
GEOG 415. Environment, Landscape and Culture **Credits: 3.00**
GEOG 427. Water Resources of the World **Credits: 3.00**

GEOG 429. Sustainability: An Ecological Perspective **Credits: 3.00**
or
ISAT 429. Sustainability: An Ecological Perspective **Credits: 3.00**

GEOG 430. Dynamics of the Atmosphere **Credits: 3.00**
GEOG 440. Advanced Biogeography **Credits: 3.00**
GEOG 447. Climates Through Time **Credits: 3.00**
GEOG 470. Senior Seminar in Environmental Conservation, Sustainability and Development **Credits: 3.00**
GEOG 476. Sustainable Cities Seminar **Credits: 3.00**
GEOG 477. Gendered Geographies **Credits: 3.00**
GEOG 490. Senior Research or Field Practicum **Credits: 3.00**
GEOG 491. International Studies **Credits: 1.00 - 3.00**
GEOG 495. Internship in Geography **Credits: 3.00 - 6.00**
GEOG 497. Independent Study **Credits: 3.00**
BIO 402. Forest Ecology **Credits: 4.00**
ISAT 425. Environmental Hydrology **Credits: 3.00**
ISAT 473. Local Agriculture and Farm Internships **Credits: 4.00**
ISAT 474. Political Ecology **Credits: 3.00**

Cognate Course: 3 Credit Hours

Select three credit hours from the following:

GEOG 365. Cartography and Geospatial Visualization **Credits: 3.00**
GEOG 366. Intermediate Geographic Information Science **Credits: 3.00**

GEOG 385. Principles of Remote Sensing **Credits: 3.00**

ECSD Concentration Total: 21 Credit Hours

Program Total: 120 Credit Hours

Geography, B.S.

Program Description

Students complete a common core that gives a firm foundation in essential geographical knowledge which includes human geography, physical geography, geospatial techniques, statistics, and human/land relations.

Beyond the core, concentrations encourage a deeper understanding of the discipline and the relevant skills to address critical problems faced by humanity. These concentrations can be customized to the student's interests (Custom) or focus on a particular area within Geography (Applied GIS, Environment, Conservation, Sustainability, and Development).

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41-44
Quantitative requirement (in addition to General Education)	3
Scientific Literacy requirement (in addition to General Education)	3-4
Major requirements	46-49
Electives	20-27
Total	120

Major Requirements

Minimum Grades

In addition to the geography core courses, students must choose a concentration, listed in the "Concentrations" section. All courses for the major must be taken on a graded basis. Students must earn a minimum grade of "C" in each of the core courses as they are prerequisites to most concentration courses.

GEOG 210. Physical Geography (2, 2) **Credits: 4.00**
GEOG 215. Introduction to Geographic Information Science and Cartography **Credits: 3.00**
GEOG 216. Earth Observation and GPS **Credits: 3.00**
GEOG 280. Human Geography: The Cultural Landscape **Credits: 3.00**
Advanced Sequence GEOG 400-level ^{1, 2} (selected in consultation with the adviser) **Credits: 6.00**
Concentration courses **Credits: 21.00 - 24.00**

Choose One Statistics Course: 3 Credit Hours

ISAT 251. Topics in Applied Statistics in ISAT [C3QR] **Credits: 3.00**

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

Choose One Environment Course: 3 Credit Hours

GEOG 290. Human-Environment Interactions **Credits: 3.00**

GEOG 308. Environment, Nature and Society **Credits: 3.00**

Major Requirements Total: 46-49 Credit Hours

Footnotes

¹ For Honors students, the advanced sequence is GEOG 499 A, B, C.

² Students may opt for a capstone experience that entails three or six hours of independent research (GEOG 490), with the approval of and in close consultation with a project adviser.

Geography Concentrations

Applied Geographic Information Science (AGIS) Concentration

JMU geography graduates with an AGIS concentration are prepared to gain professional employment with government and industry or go on to graduate programs. Public agencies where they find employment include local and regional planning agencies, mapping organizations such as the U.S. Geological Survey, intelligence agencies such as the National Geospatial-Intelligence Agency, and also in the environmental science field with the U.S. Forest Service, the National Park Service, the Environmental Protection Agency and other agencies.

JMU AGIS graduates find opportunities in industry with companies such as ESRI, Maxar, Lockheed, BAE Systems, Booz Allen Hamilton, SAIC, Sanborn and many others.

In addition to the geography core requirements, students in the AGIS concentration must complete the following course work.

GEOG 365. Cartography and Geospatial Visualization **Credits: 3.00**

GEOG 366. Intermediate Geographic Information Science **Credits: 3.00**

GEOG 367. Programming for Geographic Information Science **Credits: 3.00**

GEOG 385. Principles of Remote Sensing **Credits: 3.00**

Choose nine credit hours from the following electives: 9 Credit Hours

Up to one concentration-related course from another program may be used as an elective with the approval of the student's adviser.

GEOG 355. Global Positioning Systems **Credits: 3.00**

GEOG 406. Forest Inventory: A Geospatial Approach **Credits: 3.00**

GEOG 465. Topics in GIS **Credits: 3.00**

GEOG 466. GIS and Geographic Databases **Credits: 3.00**

GEOG 467. GIS Project Management **Credits: 3.00**

GEOG 468. Internet Geographic Information Systems **Credits: 3.00**

GEOG 469. Applications of Geographic Information Systems **Credits: 3.00**

GEOG 485. Processing Remotely Sensed Data **Credits: 3.00**

GEOG 490. Senior Research or Field Practicum **Credits: 3.00**

GEOG 491. International Studies **Credits: 1.00 - 3.00**

GEOG 495. Internship in Geography **Credits: 3.00 - 6.00**

GEOG 497. Independent Study **Credits: 3.00**

AGIS Cognate Course: 3 Credit Hours

GEOG 200. Geography: The Global Dimension [C4GE] **Credits: 3.00**

GEOG 300. Population Geography **Credits: 3.00**

GEOG 301. Introduction to Natural Disasters Response **Credits: 3.00**

or

HUMN 301. Introduction to Natural Disasters Response **Credits: 3.00**

GEOG 310. Environmental Issues **Credits: 1.00 - 4.00**

GEOG 315. Field Studies in Geography **Credits: 3.00**

GEOG 320. Human Dimensions of Global Change **Credits: 3.00**

GEOG 322. Agricultural Systems **Credits: 3.00**

GEOG 323. The Geography of Human Genetics, Infectious Diseases and Diet **Credits: 3.00**

GEOG 325. Environmental Ethics **Credits: 3.00**

GEOG 327. Climatology **Credits: 3.00**

GEOG 329. Global Climate Change **Credits: 3.00**

GEOG 330. Weather, Climate and Society **Credits: 3.00**

GEOG 331. Geography of Virginia **Credits: 3.00**

GEOG 332. Geography of Europe **Credits: 3.00**

GEOG 334. Geography of East and Southeast Asia **Credits: 3.00**

GEOG 335. Geography of Africa **Credits: 3.00**

GEOG 336. Environmental Hazards: A Focus on Southeast Asia **Credits: 3.00**

GEOG 337. Geography of Latin America **Credits: 3.00**

GEOG 338. Geography of the Philippine Islands: Problems and Possibilities **Credits: 3.00**

GEOG 339. Geography of the Caribbean **Credits: 3.00**

GEOG 340. Biogeography **Credits: 3.00**

GEOG 341. Wilderness Techniques **Credits: 3.00**

GEOG 342. Management and Protection of Natural Resources **Credits: 3.00**

GEOG 343. Wildlife Management **Credits: 3.00**

GEOG 344. Globalization and Development **Credits: 3.00**

GEOG 345. Geography of Poverty **Credits: 3.00**

GEOG 348. Indigenous Geographies **Credits: 3.00**

GEOG 350. Topics in Geography **Credits: 1.00 - 3.00**

GEOG 355. Global Positioning Systems **Credits: 3.00**

GEOG 360. GIS for Humanitarian Assistance **Credits: 3.00**

or

HUMN 360. GIS for Humanitarian Assistance **Credits: 3.00**

GEOG 375. Political Geography **Credits: 3.00**

GEOG 376. Urban Geography **Credits: 3.00**

GEOG 377. Feminist Geography **Credits: 3.00**

GEOG 380. Cultural Geography **Credits: 3.00**
GEOG 410. Geography and Film **Credits: 3.00**
GEOG 415. Environment, Landscape and Culture **Credits: 3.00**
GEOG 427. Water Resources of the World **Credits: 3.00**

GEOG 429. Sustainability: An Ecological Perspective **Credits: 3.00**
or
ISAT 429. Sustainability: An Ecological Perspective **Credits: 3.00**

GEOG 440. Advanced Biogeography **Credits: 3.00**
GEOG 447. Climates Through Time **Credits: 3.00**
GEOG 470. Senior Seminar in Environmental Conservation, Sustainability and
Development **Credits: 3.00**
GEOG 476. Sustainable Cities Seminar **Credits: 3.00**
GEOG 477. Gendered Geographies **Credits: 3.00**
BIO 402. Forest Ecology **Credits: 4.00**
ISAT 425. Environmental Hydrology **Credits: 3.00**
ISAT 473. Local Agriculture and Farm Internships **Credits: 4.00**
ISAT 474. Political Ecology **Credits: 3.00**

AGIS Concentration Total: 24 Credit Hours

Geography Custom Concentration

Methods Course

In addition to the geography core requirements, students in the customized concentration must complete one of the following methods courses:

GEOG 315. Field Studies in Geography **Credits: 3.00**
GEOG 341. Wilderness Techniques **Credits: 3.00**
GEOG 355. Global Positioning Systems **Credits: 3.00**
GEOG 365. Cartography and Geospatial Visualization **Credits: 3.00**
GEOG 366. Intermediate Geographic Information Science **Credits: 3.00**
GEOG 367. Programming for Geographic Information Science **Credits: 3.00**
GEOG 385. Principles of Remote Sensing **Credits: 3.00**

Declared Pathway

Students will choose from a set of courses, approved by a program adviser, on the basis of how they fit together thematically and support the educational objectives of the geography program. Students must take a minimum of 18 credit hours at the 300 level or above (in addition to the methods course). At least 6 of these credit hours must be at the 400 level or above.

Geography Custom Concentration Total: 21 Credit Hours

Environmental Conservation, Sustainability and Development Concentration

The Environmental Conservation, Sustainability and Development (ECSD) concentration focuses on the geographical contexts within which people and places interact. Required and elective course work allows students to explore spatial and temporal patterning between human communities and the natural

environment at multiple scales. The curriculum addresses global issues such as global climate change and globalization; environment and human interactions including political, economic, physical and ethical factors; human and ecological aspects of sustainable development; natural resource management including energy, forests, wildlife and biodiversity; cultural ecology; regional geography; and population issues.

In addition to the geography core requirements, students in the Environmental Conservation, Sustainability and Development concentration must complete the following course work.

Senior Seminar Course: 3 Credit Hours

Select three credit hours from the following:

GEOG 410. Geography and Film **Credits: 3.00**
GEOG 415. Environment, Landscape and Culture **Credits: 3.00**
GEOG 427. Water Resources of the World **Credits: 3.00**
GEOG 429. Sustainability: An Ecological Perspective **Credits: 3.00**
GEOG 430. Dynamics of the Atmosphere **Credits: 3.00**
GEOG 440. Advanced Biogeography **Credits: 3.00**
GEOG 447. Climates Through Time **Credits: 3.00**
GEOG 470. Senior Seminar in Environmental Conservation, Sustainability and
Development **Credits: 3.00**
GEOG 476. Sustainable Cities Seminar **Credits: 3.00**
GEOG 477. Gendered Geographies **Credits: 3.00**
GEOG 491. International Studies **Credits: 1.00 - 3.00**

ECSD Electives: 15 Credit Hours

Select 15 credit hours from the following.

These 300-level courses are identified on the concentration form, which will be reviewed and approved by the student's academic adviser.

In consultation with the academic adviser, a student may select one non-geography course as an elective.

GEOG 200. Geography: The Global Dimension [C4GE] **Credits: 3.00**
GEOG 300. Population Geography **Credits: 3.00**

GEOG 301. Introduction to Natural Disasters Response **Credits: 3.00**
or
HUMN 301. Introduction to Natural Disasters Response **Credits: 3.00**

GEOG 310. Environmental Issues **Credits: 1.00 - 4.00**
GEOG 315. Field Studies in Geography **Credits: 3.00**
GEOG 320. Human Dimensions of Global Change **Credits: 3.00**
GEOG 322. Agricultural Systems **Credits: 3.00**
GEOG 323. The Geography of Human Genetics, Infectious Diseases and Diet **Credits: 3.00**
GEOG 325. Environmental Ethics **Credits: 3.00**
GEOG 327. Climatology **Credits: 3.00**
GEOG 329. Global Climate Change **Credits: 3.00**
GEOG 330. Weather, Climate and Society **Credits: 3.00**
GEOG 331. Geography of Virginia **Credits: 3.00**
GEOG 332. Geography of Europe **Credits: 3.00**

GEOG 334. Geography of East and Southeast Asia **Credits: 3.00**
GEOG 335. Geography of Africa **Credits: 3.00**
GEOG 336. Environmental Hazards: A Focus on Southeast Asia **Credits: 3.00**
GEOG 337. Geography of Latin America **Credits: 3.00**
GEOG 338. Geography of the Philippine Islands: Problems and Possibilities **Credits: 3.00**
GEOG 339. Geography of the Caribbean **Credits: 3.00**
GEOG 340. Biogeography **Credits: 3.00**
GEOG 341. Wilderness Techniques **Credits: 3.00**
GEOG 342. Management and Protection of Natural Resources **Credits: 3.00**
GEOG 343. Wildlife Management **Credits: 3.00**
GEOG 344. Globalization and Development **Credits: 3.00**
GEOG 345. Geography of Poverty **Credits: 3.00**
GEOG 348. Indigenous Geographies **Credits: 3.00**
GEOG 350. Topics in Geography **Credits: 1.00 - 3.00**
GEOG 355. Global Positioning Systems **Credits: 3.00**

GEOG 360. GIS for Humanitarian Assistance **Credits: 3.00**
or
HUMN 360. GIS for Humanitarian Assistance **Credits: 3.00**

GEOG 375. Political Geography **Credits: 3.00**
GEOG 376. Urban Geography **Credits: 3.00**
GEOG 377. Feminist Geography **Credits: 3.00**
GEOG 380. Cultural Geography **Credits: 3.00**
GEOG 406. Forest Inventory: A Geospatial Approach **Credits: 3.00**
GEOG 410. Geography and Film **Credits: 3.00**
GEOG 415. Environment, Landscape and Culture **Credits: 3.00**
GEOG 427. Water Resources of the World **Credits: 3.00**

GEOG 429. Sustainability: An Ecological Perspective **Credits: 3.00**
or
ISAT 429. Sustainability: An Ecological Perspective **Credits: 3.00**

GEOG 430. Dynamics of the Atmosphere **Credits: 3.00**
GEOG 440. Advanced Biogeography **Credits: 3.00**
GEOG 447. Climates Through Time **Credits: 3.00**
GEOG 470. Senior Seminar in Environmental Conservation, Sustainability and Development **Credits: 3.00**
GEOG 476. Sustainable Cities Seminar **Credits: 3.00**
GEOG 477. Gendered Geographies **Credits: 3.00**
GEOG 490. Senior Research or Field Practicum **Credits: 3.00**
GEOG 491. International Studies **Credits: 1.00 - 3.00**
GEOG 495. Internship in Geography **Credits: 3.00 - 6.00**
GEOG 497. Independent Study **Credits: 3.00**
BIO 402. Forest Ecology **Credits: 4.00**
ISAT 425. Environmental Hydrology **Credits: 3.00**
ISAT 473. Local Agriculture and Farm Internships **Credits: 4.00**
ISAT 474. Political Ecology **Credits: 3.00**

Cognate Course: 3 Credit Hours

Select three credit hours from the following:

GEOG 365. Cartography and Geospatial Visualization **Credits: 3.00**
GEOG 366. Intermediate Geographic Information Science **Credits: 3.00**

GEOG 385. Principles of Remote Sensing **Credits: 3.00**

ECSD Concentration Total: 21 Credit Hours

Program Total: 120 Credit Hours

Intelligence Analysis, B.S.

Program Description

The Bachelor of Science degree in Intelligence Analysis provides a multi-disciplinary education for students who seek careers as analysts, with a specialization in intelligence analysis.

The degree integrates knowledge from a variety of academic disciplines (philosophy, history, political science, technology, business) and combines that with professionally oriented knowledge and skills.

Students learn innovative ways to structure their thinking to assess complex real-world problems, along with how technology can be employed to acquire data, evaluate that data, and communicate it effectively to others.

Admission Requirements

Currently Enrolled Students

Admission to JMU does not guarantee admission to the intelligence analysis major. The IA program will strive to accommodate all interested students who adopt IA upon admission to JMU. The size of the cohort could be limited beyond fall semester of sophomore year.

To be eligible to apply for full admission to the major, students must complete a statistics course (MATH 220 or ISAT 251) and complete the following courses with a minimum grade of "C":

- IA 150. Introduction to Intelligence Analysis
- IA 200. Introduction to National Security Intelligence
- IA 240. Technology Applications in a Networked World
- IA 261. Hypothesis Testing

Students will be admitted on the competitive basis of their combined performance in IA 200, IA 240 and IA 261.

Transfer Students

Transfer students must also take the four required courses during their first fall semester, as these courses are not offered in the spring. It is recommended that transfer students talk with an IA adviser regarding the selection of a minor that can be useful for the major if they begin during spring semester.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41

Degree Requirements	Credit Hours
Quantitative requirement (in addition to General Education)	3
Scientific Literacy requirement (in addition to General Education)	3-4
IA foundations and methods courses	48
IA elective courses	6
Subject Matter Specialty	18-21
General Elective Courses	0-1
Total	120

Footnote

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

Major Requirements

IA Foundation and Core Courses: 48 Credit Hours

IA Foundations Courses: 24 Credits

IA 150. Introduction to Intelligence Analysis **Credits: 3.00**
 IA 200. Introduction to National Security Intelligence **Credits: 3.00**
 IA 210. Introduction to Global Competitive Intelligence **Credits: 3.00**
 IA 250. Research Design and Writing for Intelligence Analysis **Credits: 3.00**
 IA 300. Seminar on Issues in Intelligence Analysis **Credits: 3.00**
 IA 405. Ethics, Law and Intelligence Analysis **Credits: 3.00**
 IA 440. Intelligence Analysis Capstone Project Preparation **Credits: 3.00**
 IA 450. Capstone Project in Intelligence Analysis **Credits: 3.00**

Technology Methods Courses: 12 Credits

IA 240. Technology Applications in a Networked World **Credits: 3.00**
 IA 241. Introduction to Programming and Data Science **Credits: 3.00**
 IA 340. Data Mining, Modeling and Knowledge Discovery **Credits: 3.00**
 IA 342. Visualization Methods, Technologies and Tools for Intelligence Analysis **Credits: 3.00**

Reasoning Methods Courses: 12 Credits

IA 261. Hypothesis Testing **Credits: 3.00**
 IA 312. Causal Analysis **Credits: 3.00**
 IA 313. Counterfactual Reasoning **Credits: 3.00**
 IA 314. Strategy Assessment (Rational Decision Theory) **Credits: 3.00**

General Education Courses: 41 Credit Hours

Cluster One (PHIL 120 recommended) *9 Credit Hours*
 Cluster Two (REL 101 recommended) *9 Credit Hours*

Cluster Three (ISAT 251 or MATH 220 required) *10 Credit Hours*
 Cluster Four (POSC 200 or POSC 225 recommended) *7 Credit Hours*
 Cluster Five (PSYC 101 recommended) *6 Credit Hours*

IA Elective Courses: 6 Credits

Students must take two of the following IA elective courses:

IA 341. System Dynamics Modeling, Simulation and Analysis **Credits: 3.00**
 IA 360. Terrorism and Counterterrorism **Credits: 3.00**
 IA 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**
 IA 365. Cyber Intelligence **Credits: 3.00**
 IA 370. Advanced Competitive Intelligence **Credits: 3.00**
 IA 459. Awareness and Understanding of Chemical, Biological and Radiological Weapons of Mass Destruction **Credits: 3.00**
 IA 460. All Hazards Response And Management Systems **Credits: 3.00**
 IA 480. Selected Topics in Intelligence Analysis **Credits: 3.00** (IA 480 may be taken twice)
 GEOG 375. Political Geography **Credits: 3.00**

Subject Matter Specialty: 18-21 Credits

Students must complete a minor or a second major in another field (at least 18 credits). With the approval of an IA adviser, students may, in special cases, design their own custom concentration of six courses that fit together thematically and support the educational objectives of the IA program.

Program Total: 120 Credit Hours

Department of Interdisciplinary Liberal Studies

Scott Paulson, **Director**
Phone: (540) 568-5260
Email: paulsosa@jmu.edu
Location: Gabbin Hall, Room 118
Website: <http://www.jmu.edu/idls>

Professors

G. F. Linder, S. Paulson

Associate Professors

M. Chamberlin, P. Frana, H Gelfand, J. Mangan, M. Schmitt-Harsh

Assistant Professor

A. Davis, J. Walker, F. Wang

Interdisciplinary Liberal Studies (IDLS) offers programs in the tradition of a liberal education, focusing on transferable skills and the methods and

knowledge from, multiple disciplines. Our programs allow students flexibility to pursue their interests and combine them to create unique learning opportunities.

Independent Scholars Program

Scott Paulson, **Academic Unit Head**
Matthew Chamberlin, **Director**
Phil Frana, **Professor**
Phone: (540) 568-5218
Email: chambema@jmu.edu
Location: Gabbin Hall, Room 207

Mission

The mission of the Independent Scholars (IS) major is to provide students with a learning environment in which to develop and pursue self-designed curricular pathways and research goals, identifying unique domains of inquiry and interweaving multiple modes of thinking. Students are empowered to cultivate their own academic and professional interests in ways that foster the ability to comprehend and contribute uniquely and innovatively to a wide array of topics, questions and problems.

Objectives

IS majors will:

- develop topic-based interests and inquiry strategies to pursue those interests.
- enhance creativity, self-directedness and perseverance required for inquiry.
- learn research, technical and communication skills relevant to inquiry.
- enhance aptitude and confidence in working independently and collectively.
- apply knowledge and skills in experiential-learning settings.

Individualized Study B.A. with major in Independent Scholars

Program Description

Individualized curricula using existing courses across participating JMU units will be constructed with faculty oversight to help students pursue their own inquiry goals. Each student's curriculum will include:

- a cross-disciplinary exploration course (IND 200)
- at least 36 credit hours of course work beyond General Education requirements
- at least four credits of skill-enhancing workshops (IND 300)
- a six-credit hour senior project (IND 499A)
- the plans for relevant field experiences, internships and/or study abroad programs.

For students in the honors program, the IS senior project will fulfill the senior honors project requirement.

Admission to the Major

Acceptance into the IS major is based on successful completion of the IND 200 introductory course.

Interested students will meet with IS faculty to discuss enrolling in the IS introductory course (IND 200), which is taught each semester. Decisions about acceptance into IS will be made by the IS faculty. Successful applicants will develop a convincing inquiry proposal and feasible curriculum, that clearly outlines a topic of inquiry, and demonstrates exceptional intellectual curiosity, communication ability, and independent research potential. Students not accepted into IS at the end of IND 200 will be carefully advised into other majors and can use the three IND credits as electives.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Philosophy course ²	3
Foreign Language	1-14
Major requirements	49
Electives	13-27
Total	120

Footnotes

- ¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.
² In addition to course work taken to fulfill General Education requirement.

Individualized Study B.S. with major in Independent Scholars

Program Description

Individualized curricula using existing courses across participating JMU units will be constructed with faculty oversight to help students pursue their own inquiry goals. Each student's curriculum will include:

- a cross-disciplinary exploration course (IND 200)
- at least 36 credit hours of course work beyond General Education requirements
- at least four credits of skill-enhancing workshops (IND 300)
- a six-credit hour senior project (IND 499A)
- the plans for relevant field experiences, internships and/or study abroad programs.

For students in the honors program, the IS senior project will fulfill the senior honors project requirement.

Admission to the Major

Acceptance into the IS major is based on successful completion of the IND 200 introductory course.

Interested students will meet with IS faculty to discuss enrolling in the IS introductory course (IND 200), which is taught each semester. Decisions about acceptance into IS will be made by the IS faculty. Successful applicants will develop a convincing inquiry proposal and feasible curriculum, that clearly outlines a topic of inquiry, and demonstrates exceptional intellectual curiosity, communication ability, and independent research potential.

Students not accepted into IS at the end of IND 200 will be carefully advised into other majors and can use the three IND credits as electives.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement ²	3
Scientific Literacy requirement ²	3-4
Major requirements	49
Electives	23-24
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² In addition to course work taken to fulfill General Education requirement.

Middle Grades Science Minor

Students in the Middle Grades Science minor will complete requirements at the introductory and intermediate level in each of three content areas: earth and planetary science, physical science, and life sciences. Within each area, multiple options are available, allowing students to apply previously earned credit, such as AP, dual enrollment and/or JMU courses earned prior to declaring the minor. In each area, there is a single course that serves as the preferred option for students with no previous coursework in the area. These courses are denoted with an asterisk. All students will take an upper level interdisciplinary course (IDLS 395) focused on scientific practice, cross-cutting concepts and the nature of science.

Introductory Level: Middle Grades Science Minor: 9-16 Credit Hours

Choose one from each area.

Earth and Planetary Science: 3-4 Credit Hours

ISCI 171. Earth and Planetary Science for Teachers [C3NS] **Credits: 3.00 ***

or

GEOL 102. Environment: Earth [C3NS] **Credits: 3.00**

or

GEOL 110. Physical Geology [C3NS] **Credits: 3.00 and**

GEOL 110L. Physical Geology Laboratory [C3L] **Credits: 1.00**

Physical Science: 3-8 Credit Hours

Choose one of the options below:

Option 1: 3 Credit Hours

ISCI 172. Physical Science for Teachers [C3PP] **Credits: 3.00 ***

Option 2: 8 Credit Hours

Select one set of physics courses and the chemistry courses below:

PHYS 140. College Physics I [C3PP] **Credits: 3.00 and**

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**

or

PHYS 240. University Physics I [C3PP] **Credits: 3.00 and**

PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00**

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00 and**

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

Life Science: 3-4 Credit Hours

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

or

ISCI 173. Life and Environmental Science for Teachers [C3L] **Credits: 3.00 ***

Intermediate Level: Middle Grades Science Minor: 10-11 Credit Hours

Choose one from each area.

Earth and Planetary Science: 3 Credit Hours

GEOL 211. Introduction to Oceanography [C3NS] **Credits: 3.00 ***

Physical Science: 3-4 Credit Hours

CHEM 120. Concepts of Chemistry [C3PP] **Credits: 3.00**

or

PHYS 121. The Physical Nature of Light and Sound (3, 1) [C3PP] **Credits: 4.00**

or
CHEM 132. General Chemistry II **Credits: 3.00 and**
CHEM 132L. General Chemistry Laboratory **Credits: 1.00**
or
PHYS 150. College Physics II **Credits: 3.00 and**
PHYS 150L. General Physics Laboratory **Credits: 1.00**
or
PHYS 250. University Physics II **Credits: 3.00 and**
PHYS 250L. University Physics Laboratory II **Credits: 1.00**

Life Science: 4 Credit Hours

BIO 150. Foundations of Biology II **Credits: 3.00 and**
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

Upper Level: Middle Grades Science Minor: 3 Credit Hours

IDLS 395. Topics in IDLS **Credits: 1.00 - 6.00**

Total: 22-30 Credit Hours

Footnote

* In each area, there is a single course that serves as the preferred option for students with no previous coursework in the area.

Department of International Business

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Assistant Professor

K. Haensel, P. Mutreja

Lecturers

P. Heap, D. Parker

Mission

The mission of the Department of International Business is to provide nationally competitive undergraduate education in the study of international business. The program is cross-disciplinary and designed to prepare students for participation in organizations that require a broad business perspective,

applicable skills in global business and an understanding of the complexity of the globalized world. The program also prepares students for graduate programs in business and related fields.

Goals

- To provide a strong foundation in the international implications for the business disciplines.
- To develop students' cultural understanding through course work and a required international experience.
- To enable students to gain proficiency in a second language.
- To enable students to develop extensive knowledge of a specific region of the world related to the second language.
- To develop students' competencies in addressing specific managerial issues related to international business, such as ethical considerations, managing foreign exchange risk, managing a multicultural work force, etc.
- To facilitate students' continuing development of written and oral communication skills.

Career Opportunities

- Consumer marketing and business-to-business marketing, including sales, consumer relations and market analysis.
- Consulting, including management analysis, strategic planning, expansion overseas and market entry strategies.
- Marketing research, including database management and account analysis.
- Corporate finance, financial analyst, project management, junior analyst-finance, planning and administration.
- Capital management, credit manager, assistant treasurer – funds flow and risk management.
- Banking and financial institutions, lending officer and marketing officer.
- Foreign commercial service officer in the U.S. Department of Commerce.
- Careers that require analytic acumen and the ability to adapt quickly to diverse and changing environments.

Co-curricular Activities and Organizations

Global Commerce Club. This student club is open to all JMU students. It sponsors speakers, informational sessions and social events.

American Marketing Association. This student club is affiliated with the American Marketing Association, a national marketing association for marketing professionals, faculty and students. MMA is open to all JMU students. MMA is comprehensive with its marketing programming and offers students information and activities in direct marketing, retailing and marketing management.

Pi Sigma Epsilon. This is a professional fraternity, which focuses on programming and extracurricular experiences in marketing, personal selling and sales management.

Financial Management Association. FMA is an organization designed for those interested in pursuing a career in the financial arena.

International Business, B.B.A.

Program Description

The B.B.A. degree in international business requires a minimum of 120 credit hours of undergraduate work.

The credit hour requirements are as follows:

Admission and Retention Requirements

Students planning to major in international business must complete the 27 to 28 hour, lower-level B.B.A. curriculum prior to enrolling in upper-level core courses, normally taken in the first semester of the junior year. It is expected that the lower-level core curriculum along with most of the university General Education curriculum will be completed during the first two years of study. Failing to complete all lower-level core requirements on time will delay enrollment in upper-level core and major courses until at least the second semester of the junior year.

The foreign language requirements of the major begin at the advanced level. Consequently, students with little or no foreign language training must use elective credits to obtain proficiency through the intermediate level.

College of Business Progression Standards

Any student admitted to JMU can declare any major offered by the College of Business. However, students must make satisfactory progress in order to be formally admitted into the College of Business. Requirements to continue pursuing a B.B.A. degree, often referred to as progression standards or formal admission, can be found on the College of Business catalog page.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education courses ^{1,2}	41
B.B.A. core courses	45
International business major requirements ³	24
Foreign language requirements (see required courses for details)	12
Total	122

Footnotes

¹ Students are encouraged to choose general education courses having a foreign or international content. The program office has a list of these courses. The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.

² Some language and General Education courses may be completed during the semester abroad.

³ Students are required to spend the equivalent of at least six weeks abroad. See below for details.

Major Requirements

Students majoring in international business must carefully plan their individual course work because not all required courses are offered each semester and because each student in the major is required to complete an "international experience" (study, intern or work abroad). The international experience requirement is for a minimum of six weeks outside of the United States, unless express permission is granted by the program director for another option. The primary language spoken in the country chosen by each student for the study/work abroad requirement is not to be English and would optimally be the language chosen by the student to meet the IB language requirement. Approval of the international experience requirement must be obtained from the program director (approval forms are available online. International students should see the program director to determine appropriate requirements for this aspect of the curriculum.

International business majors must select a world region on which to concentrate that coincides with their selected language. For example, an international business major who selects French as his/her second language could choose Europe, Africa or Asia as a world region. Also, a student who selects Spanish as the second language could select either Europe or the Americas. The acceptable world regions are Africa/Middle East, Americas, Asia and Europe.

As part of the JMU assessment program, graduating seniors are required to participate in assessment activities. Assessment information is used to assist the COB faculty in modifying curricula and co-curricular events.

BLAW 497. Legal Aspects of International Business **Credits: 3.00** ¹
 IB 200. Introduction to International Business **Credits: 3.00** ¹
 IB 480. International Business Theory and Policy **Credits: 3.00** ²
 MGT 340. International Management **Credits: 3.00**
 Foreign language 300. Grammar and Communication
 Foreign language 307-308. Civilization
 Foreign language 330. Business
 Foreign language 375. Business and Society ³

Footnotes

¹ Offered fall semester only. Should be completed before COB 300.

² Offered spring semester only.

³ Students choosing Spanish to meet the IB language requirement should take either SPAN 485 or SPAN 486 to fulfill this requirement.

The remaining courses will depend upon which of the following three concentrations the student selects:

General
 Marketing
 Finance

Recommended Schedule for Majors

Third Year

COB 300A. Integrative Business: Management **Credits: 3.00**

COB 300B. Integrative Business: Finance **Credits: 3.00**
 COB 300C. Integrative Business: Operations **Credits: 3.00**
 COB 300D. Integrative Business: Marketing **Credits: 3.00**
 COB 318. Legal and Ethical Environment of Business **Credits: 3.00**
 ECON 270. International Economics **Credits: 3.00**²
 General Education **Credits: 6.00**
 Foreign language (300) grammar and communication ¹ **Credits: 3.00**
 Foreign language (307-308) civilization course ¹ **Credits: 3.00**

Third Year Total: 30 Credit Hours

Footnotes

¹ International business major requirement.

² International business major requirement. Students with a finance concentration must take ECON 370 in place of ECON 270. ECON 370 is offered fall semester only.

Finance Concentration - Fourth Year

BLAW 497. Legal Aspects of International Business **Credits: 3.00**^{1,2}
 COB 487. Strategic Management **Credits: 3.00**
 ECON 372. International Finance and Payments **Credits: 3.00**¹
 FIN 355. International Financial Management **Credits: 3.00**^{1,2}
 FIN 360. Analytical Methods in Finance **Credits: 3.00**¹
 IB 480. International Business Theory and Policy **Credits: 3.00**^{1,3}
 MGT 340. International Management **Credits: 3.00**¹
 Foreign language (330) business course ¹ **Credits: 3.00**
 Foreign language (375) business and society ¹ **Credits: 3.00**

Finance Concentration - Fourth Year Total: 27 Credit Hours

General Concentration - Fourth Year

BLAW 497. Legal Aspects of International Business **Credits: 3.00**^{1,2}
 COB 487. Strategic Management **Credits: 3.00**¹
 FIN 355. International Financial Management **Credits: 3.00**^{1,2}
 IB 480. International Business Theory and Policy **Credits: 3.00**^{1,3}
 MGT 340. International Management **Credits: 3.00**¹
 MGT 460. Employment Law **Credits: 3.00**¹
 Foreign language (330) business course ¹ **Credits: 3.00**
 Foreign language (375) business and society ¹ **Credits: 3.00**

General Concentration - Fourth Year Total: 27 Credit Hours

Marketing Concentration - Fourth Year

BLAW 497. Legal Aspects of International Business **Credits: 3.00**^{1,2}
 IB 480. International Business Theory and Policy **Credits: 3.00**^{1,3}
 MGT 340. International Management **Credits: 3.00**¹

MKTG 460. Global Marketing **Credits: 3.00**¹
 COB 487. Strategic Management **Credits: 3.00**
 Foreign language (330) business course ¹ **Credits: 3.00**
 Foreign language (375) business and society ¹ **Credits: 3.00**

Choose two of the following: 6 Credit Hours

MKTG 384. Integrated Marketing Communications **Credits: 3.00**
 MKTG 385. Consumer Behavior **Credits: 3.00**
 MKTG 430. Professional Selling **Credits: 3.00**
 MKTG 470. Strategic Internet Marketing **Credits: 3.00**⁴
 MKTG 482. Marketing Analytics **Credits: 3.00**

Marketing Concentration Total: 27 Credit Hours

Footnotes

¹ International business major requirement.

² Offered fall semester only.

³ Offered spring semester only.

⁴ MKTG 384 is a prerequisite for MKTG 470.

Department of Justice Studies

Peggy S. Plass, **Department Head**
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Professors

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Assistant Professors

G. Perez, M. Švigelj

Lecturer

D. Breneman

Mission

Justice studies is committed to offering a cross-disciplinary, intellectually challenging and vocationally relevant course of study for persons interested in

academic or applied careers in justice studies at the community, national or global level.

Goals

To carry out this mission, justice studies seeks to:

- Help students develop a comprehensive understanding of justice studies. Examine and explain justice and injustice and their impact on individuals, communities, institutions and/or nations.
- Understand human behavior and interactive systems with a focus on negotiation and conflict resolution in justice contexts.
- Sharpen students' ability to think and reason critically, to practice sound methodological skills, and to communicate effectively.
- Prepare students to utilize and produce scholarship in the field of justice studies.

Career Opportunities

The justice studies major includes opportunities for field work and career-related internships as part of the curriculum.

- Peace Corps
- Non-government organizations
- Law enforcement
- Corrections
- Law
- Nonprofit groups (national and international)
- Human services
- Domestic and international security
- Intelligence analysis
- Diplomatic Corps
- Research and graduate study

Justice Studies, B.A.

Transfer Credit

A maximum of two courses may be transferred into the justice studies major from other institutions. No transfer credit will be given for any course offered in the major at the 300 or 400 level.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ^{1, 2}	41
Philosophy course	3
Foreign language courses (intermediate level required) ³	1-14
Major requirements (core courses and selected concentrations)	41
Electives	18-38

Degree Requirements	Credit Hours
Total	120

Footnotes

- ¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.
- ² MATH 220 (prereq for JUST 399) will fulfill a General Education requirement.
- ³ The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232), or by placing out of that language through the Department of Foreign Language, Literatures and Cultures' placement test.

Major Requirements

Core Courses: 11 Credit Hours

- JUST 100. Justice Studies Proseminar Credits: 1.00
- JUST 200. Introduction to Justice Studies Credits: 3.00
- JUST 399. Justice Research Methods Credits: 4.00 ¹
- JUST 400. Senior Seminar in Justice Studies Credits: 3.00

Footnote

¹ MATH 220 is a prerequisite for JUST 399.

Fairness and Responsibility Component Requirement: 3 Credit Hours

Take one of the following courses. Any course not used to fulfill this requirement may be used as elective credit.

- JUST 328. Race, Class and Justice Credits: 3.00
- JUST 339. Mapping Justice Credits: 3.00
- JUST 341. Gender and Justice Credits: 3.00
- JUST 354. Native Justice and Resistance Credits: 3.00
- JUST 356. Refugees and Humanitarian Response Credits: 3.00
- JUST 374. War and Justice Credits: 3.00
- JUST 385. Disability and Justice Credits: 3.00

Choose one of the following foundation courses (which is not required for your concentration): 3 Credit Hours

- JUST 210. Crime and Criminal Justice Credits: 3.00
- JUST 212. Theories of Crime and Criminal Justice Credits: 3.00
- JUST 221. Social Justice Theories Credits: 3.00
- JUST 223. Social Justice Interventions and Policies Credits: 3.00
- JUST 235. Justice in the Global Community Credits: 3.00
- JUST 237. Dilemmas in Global Justice Credits: 3.00

Total: 17 Credit Hours

Electives: 18 Credit Hours

Students select six additional courses from the following list. At least four of the six electives must have a JUST identifier.

Students may select only one of the following courses for elective credit: JUST 401, JUST 402, JUST 403, JUST 404, or JUST 405. Students should seek approval from their advisers or the department head.

CRJU 300. Ethics in Criminal Justice **Credits: 3.00**
CRJU 321. Criminalistics **Credits: 3.00**
CRJU 328. Criminal Procedure **Credits: 3.00**
CRJU 329. Criminal Investigation and Evidence **Credits: 3.00**
CRJU 335. Law Enforcement **Credits: 3.00**
CRJU 337. Courts and the Judiciary **Credits: 3.00**
CRJU 340. Administration of Justice **Credits: 3.00**
HIST 338. U.S. Urban History **Credits: 3.00**
JUST 300. Perspectives On Comparative Justice **Credits: 3.00**
JUST 301. Advanced Level Special Topics in Justice Studies **Credits: 3.00**
JUST 307. Justice and Crime **Credits: 3.00**
JUST 309. Global Crime **Credits: 3.00**
JUST 311. Women, Crime and Criminal Justice **Credits: 3.00**
JUST 312. Mass and Serial Murder **Credits: 3.00**
JUST 316. Human Development and Crime **Credits: 3.00**
JUST 317. Victimization of Children **Credits: 3.00**
JUST 318. Sex Offenders **Credits: 3.00**
JUST 320. Organized Crime **Credits: 3.00**
JUST 322. Understanding Violence and Nonviolence **Credits: 3.00**
JUST 323. Comparative Criminal Justice **Credits: 3.00**
JUST 324. Death Penalty **Credits: 3.00**
JUST 326. Victimology **Credits: 3.00**
JUST 327. Criminal Law **Credits: 3.00**
JUST 328. Race, Class and Justice **Credits: 3.00**
JUST 329. Perspectives on Law **Credits: 3.00**
JUST 330. Corrections **Credits: 3.00**
or
SOWK 330. Corrections **Credits: 3.00**
JUST 331. Human Rights in Theory and Practice **Credits: 3.00**
or
POSC 331. Human Rights in Theory and Practice **Credits: 3.00**
JUST 334. Media and Justice **Credits: 3.00**
JUST 339. Mapping Justice **Credits: 3.00**
JUST 341. Gender and Justice **Credits: 3.00**
JUST 343. Justice and Society **Credits: 3.00**
JUST 345. Restorative Justice **Credits: 3.00**
JUST 350. Justice and Globalization **Credits: 3.00**
JUST 351. Building Democracy **Credits: 3.00**
JUST 352. Global Migration **Credits: 3.00**
JUST 353. Justice and Development **Credits: 3.00**
JUST 354. Native Justice and Resistance **Credits: 3.00**
JUST 355. Solutions to Global Poverty **Credits: 3.00**
JUST 356. Refugees and Humanitarian Response **Credits: 3.00**
JUST 357. Environmental Justice **Credits: 3.00**

JUST 361. Terrorism **Credits: 3.00**
JUST 365. Justice in Literature, Film and Art **Credits: 3.00**
JUST 372. Ethics and International Politics **Credits: 3.00**
JUST 373. Rebuilding Post Conflict Societies **Credits: 3.00**
JUST 374. War and Justice **Credits: 3.00**
JUST 375. Genocide in the 20th Century **Credits: 3.00**
JUST 376. Global Social Movements **Credits: 3.00**
JUST 377. Global Futures **Credits: 3.00**
JUST 385. Disability and Justice **Credits: 3.00**
JUST 386. Sexual Orientation, Law and Justice **Credits: 3.00**
JUST 392. Peace Studies **Credits: 3.00**
or
POSC 392. Peace Studies **Credits: 3.00**

POSC 395. International Law **Credits: 3.00**
JUST 397. Legal Research and Information Literacy **Credits: 3.00**
JUST 401. Internship in Justice Studies **Credits: 3.00**
JUST 402. Advanced Research in Justice Studies **Credits: 3.00**
JUST 403. Nelson Institute Seminar **Credits: 3.00**
JUST 404. Practicum in Community-Based Research **Credits: 3.00**
JUST 405. Research Assistantship in Justice Studies **Credits: 1.00 - 3.00**
JUST 499. Honors **Credits: 1.00 - 3.00**
PHIL 335. The Individual, the State, and Justice **Credits: 3.00**
POSC 326. Civil Rights **Credits: 3.00**
POSC 348. The Politics of Cultural Pluralism **Credits: 3.00**
POSC 372. Ethics and International Politics **Credits: 3.00**
POSC 383. Women and Politics in Comparative Perspective **Credits: 3.00**
POSC 396. International Organizations **Credits: 3.00**
PSYC 310. The Psychology of Women and Gender **Credits: 3.00**
PSYC 316. Human Development and Crime **Credits: 3.00**
PSYC 320. Diversity Issues in Psychology **Credits: 3.00**
PSYC 415. Forensic Psychology **Credits: 3.00**
REL 322. Sociology of Religion **Credits: 3.00**
REL 450. Religion and Society **Credits: 3.00**
SCOM 332. Mediation **Credits: 3.00**
SCOM 342. Argument and Advocacy **Credits: 3.00**
SOCI 322. Sociology of Religion **Credits: 3.00**
SOCI 336. Race and Ethnicity **Credits: 3.00**
SOCI 338. U.S. Urban History **Credits: 3.00**
SOCI 348. Introduction to Developing Societies **Credits: 3.00**
SOCI 354. Social Inequality **Credits: 3.00**
SOCI 367. Sociology of Sexuality **Credits: 3.00**

Justice Studies Concentrations

Concentration A: Criminal Justice and Criminology

This concentration focuses on the nature, causes and solutions for crime, primarily, but not exclusively, in the United States. All students in Concentration A must take both of these foundation courses: JUST 210 and JUST 212. Students select six additional courses from the following. At least four of the six electives must have a JUST identifier.

Concentration A Electives

Note: Other courses may be substituted with adviser's and department chair's consent.

Select six additional courses from the following:

CRJU 300. Ethics in Criminal Justice **Credits: 3.00**
CRJU 321. Criminalistics **Credits: 3.00**
CRJU 328. Criminal Procedure **Credits: 3.00**
CRJU 329. Criminal Investigation and Evidence **Credits: 3.00**
CRJU 335. Law Enforcement **Credits: 3.00**
CRJU 337. Courts and the Judiciary **Credits: 3.00**
CRJU 340. Administration of Justice **Credits: 3.00**
JUST 301. Advanced Level Special Topics in Justice Studies **Credits: 3.00**¹
JUST 307. Justice and Crime **Credits: 3.00**
JUST 309. Global Crime **Credits: 3.00**
JUST 311. Women, Crime and Criminal Justice **Credits: 3.00**
JUST 312. Mass and Serial Murder **Credits: 3.00**

JUST 316. Human Development and Crime **Credits: 3.00**
or
PSYC 316. Human Development and Crime **Credits: 3.00**

JUST 317. Victimization of Children **Credits: 3.00**
JUST 318. Sex Offenders **Credits: 3.00**
JUST 320. Organized Crime **Credits: 3.00**
JUST 322. Understanding Violence and Nonviolence **Credits: 3.00**
JUST 324. Death Penalty **Credits: 3.00**
JUST 327. Criminal Law **Credits: 3.00**
JUST 329. Perspectives on Law **Credits: 3.00**

JUST 330. Corrections **Credits: 3.00**
or
SOWK 330. Corrections **Credits: 3.00**

JUST 334. Media and Justice **Credits: 3.00**
JUST 339. Mapping Justice **Credits: 3.00**
JUST 341. Gender and Justice **Credits: 3.00**
JUST 343. Justice and Society **Credits: 3.00**
JUST 345. Restorative Justice **Credits: 3.00**
JUST 357. Environmental Justice **Credits: 3.00**
JUST 361. Terrorism **Credits: 3.00**
JUST 365. Justice in Literature, Film and Art **Credits: 3.00**¹
JUST 385. Disability and Justice **Credits: 3.00**
JUST 386. Sexual Orientation, Law and Justice **Credits: 3.00**
JUST 397. Legal Research and Information Literacy **Credits: 3.00**
JUST 401. Internship in Justice Studies **Credits: 3.00**¹
JUST 402. Advanced Research in Justice Studies **Credits: 3.00**¹
JUST 403. Nelson Institute Seminar **Credits: 3.00**¹
JUST 404. Practicum in Community-Based Research **Credits: 3.00**¹
JUST 405. Research Assistantship in Justice Studies **Credits: 1.00 – 3.00**
PSYC 415. Forensic Psychology **Credits: 3.00**²

Concentration A Total: 18 Credit Hours

Concentration B: Global Justice and Policy

This concentration explores issues of justice in global context. Most prominent among them are questions of security, equity and equality. Courses address the individual, group and state dimensions of these and related issues in a diverse set of policy areas including democratization, cultural identity, developmental, environmental protection, conflict resolution and human rights.

Students in Concentration B must take both foundation courses: JUST 235 and JUST 237.

Students select six additional elective courses from the following. At least four must have a JUST identifier.

Concentration B Electives

Note: Other courses may be substituted with adviser's and department chair's consent.

Select six additional courses from the following:

JUST 301. Advanced Level Special Topics in Justice Studies **Credits: 3.00**¹
JUST 309. Global Crime **Credits: 3.00**
JUST 320. Organized Crime **Credits: 3.00**
JUST 324. Death Penalty **Credits: 3.00**

JUST 331. Human Rights in Theory and Practice **Credits: 3.00**
or
POSC 331. Human Rights in Theory and Practice **Credits: 3.00**

JUST 334. Media and Justice **Credits: 3.00**¹
JUST 339. Mapping Justice **Credits: 3.00**
JUST 341. Gender and Justice **Credits: 3.00**
JUST 345. Restorative Justice **Credits: 3.00**
JUST 350. Justice and Globalization **Credits: 3.00**
JUST 351. Building Democracy **Credits: 3.00**
JUST 352. Global Migration **Credits: 3.00**
JUST 353. Justice and Development **Credits: 3.00**
JUST 354. Native Justice and Resistance **Credits: 3.00**
JUST 355. Solutions to Global Poverty **Credits: 3.00**
JUST 356. Refugees and Humanitarian Response **Credits: 3.00**
JUST 357. Environmental Justice **Credits: 3.00**
JUST 361. Terrorism **Credits: 3.00**
JUST 365. Justice in Literature, Film and Art **Credits: 3.00**¹

JUST 372. Ethics and International Politics **Credits: 3.00**
or
POSC 372. Ethics and International Politics **Credits: 3.00**

JUST 373. Rebuilding Post Conflict Societies **Credits: 3.00**
JUST 374. War and Justice **Credits: 3.00**
JUST 375. Genocide in the 20th Century **Credits: 3.00**
JUST 376. Global Social Movements **Credits: 3.00**
JUST 377. Global Futures **Credits: 3.00**
JUST 385. Disability and Justice **Credits: 3.00**
JUST 386. Sexual Orientation, Law and Justice **Credits: 3.00**

JUST 392. Peace Studies **Credits: 3.00**

or

POSC 392. Peace Studies **Credits: 3.00**

JUST 397. Legal Research and Information Literacy **Credits: 3.00**

JUST 401. Internship in Justice Studies **Credits: 3.00**¹

JUST 402. Advanced Research in Justice Studies **Credits: 3.00**¹

JUST 403. Nelson Institute Seminar **Credits: 3.00**¹

JUST 404. Practicum in Community-Based Research **Credits: 3.00**¹

JUST 405. Research Assistantship in Justice Studies **Credits: 1.00 - 3.00**

MSCI 390. The Combat Experience **Credits: 3.00**

PHIL 335. The Individual, the State, and Justice **Credits: 3.00**

POSC 395. International Law **Credits: 3.00**

POSC 396. International Organizations **Credits: 3.00**

SCOM 332. Mediation **Credits: 3.00**

SCOM 342. Argument and Advocacy **Credits: 3.00**

SOCI 348. Introduction to Developing Societies **Credits: 3.00**

Any 300-level anthropology course that is centered on a world region (other than North America)³

Any 300-level history course that is centered on a world region (other than North America) and that includes coverage of the 20th century³

Any 300-level political science course that is regionally focused³

Any 300-level religion course with a contemporary and international focus

Concentration B Total: 18 Credit Hours

Concentration C: Social Justice Engagement

This concentration is designed to investigate what is fair, equitable and just for society. Emphasizing the oppression and liberation of vulnerable, exploited and marginalized populations, this curriculum promotes sustainable and just solutions to social, political and economic problems.

Students must take both of these foundation courses JUST 221 and JUST 223 .

Students select six additional elective courses from the following. At least four of the six electives must have a JUST identifier.

Concentration C Electives

Note: Other courses may be substituted with adviser's and department head's consent.

Choose from the following:

HIST 338. U.S. Urban History **Credits: 3.00**

or

SOCI 338. U.S. Urban History **Credits: 3.00**

JUST 301. Advanced Level Special Topics in Justice Studies **Credits: 3.00**¹

JUST 309. Global Crime **Credits: 3.00**

JUST 311. Women, Crime and Criminal Justice **Credits: 3.00**

JUST 322. Understanding Violence and Nonviolence **Credits: 3.00**

JUST 324. Death Penalty **Credits: 3.00**

JUST 334. Media and Justice **Credits: 3.00**¹

JUST 339. Mapping Justice **Credits: 3.00**

JUST 341. Gender and Justice **Credits: 3.00**

JUST 343. Justice and Society **Credits: 3.00**

JUST 352. Global Migration **Credits: 3.00**

JUST 354. Native Justice and Resistance **Credits: 3.00**

JUST 355. Solutions to Global Poverty **Credits: 3.00**

JUST 356. Refugees and Humanitarian Response **Credits: 3.00**

JUST 357. Environmental Justice **Credits: 3.00**

JUST 361. Terrorism **Credits: 3.00**

JUST 365. Justice in Literature, Film and Art **Credits: 3.00**

JUST 375. Genocide in the 20th Century **Credits: 3.00**

JUST 376. Global Social Movements **Credits: 3.00**

JUST 385. Disability and Justice **Credits: 3.00**

JUST 386. Sexual Orientation, Law and Justice **Credits: 3.00**

JUST 392. Peace Studies **Credits: 3.00**

or

POSC 392. Peace Studies **Credits: 3.00**

JUST 397. Legal Research and Information Literacy **Credits: 3.00**

JUST 401. Internship in Justice Studies **Credits: 3.00**¹

JUST 402. Advanced Research in Justice Studies **Credits: 3.00**¹

JUST 403. Nelson Institute Seminar **Credits: 3.00**¹

JUST 404. Practicum in Community-Based Research **Credits: 3.00**¹

JUST 405. Research Assistantship in Justice Studies **Credits: 1.00 - 3.00**

MSCI 390. The Combat Experience **Credits: 3.00**

POSC 326. Civil Rights **Credits: 3.00**

POSC 348. The Politics of Cultural Pluralism **Credits: 3.00**

POSC 383. Women and Politics in Comparative Perspective **Credits: 3.00**

PSYC 310. The Psychology of Women and Gender **Credits: 3.00**²

PSYC 320. Diversity Issues in Psychology **Credits: 3.00**

REL 322. Sociology of Religion **Credits: 3.00**

or

SOCI 322. Sociology of Religion **Credits: 3.00**

REL 371. Religion and Disability **Credits: 3.00**

REL 372. Religion and Medicine, East and West **Credits: 3.00**

REL 450. Religion and Society **Credits: 3.00**

SOCI 336. Race and Ethnicity **Credits: 3.00**

SOCI 354. Social Inequality **Credits: 3.00**

SOCI 367. Sociology of Sexuality **Credits: 3.00**

Concentration C Total: 18 Credit Hours

Footnotes

¹ May be taken for elective credit in Concentration A , Concentration B and Concentration C when the topic is appropriate. Students may select only one of the following for elective credit: JUST 401, JUST 402, JUST 403, JUST 404 or JUST 405. Students should seek approval from their advisers or the department head.

² Course is only open to students who are double majoring in Psychology.

³ Only one course from this option may be counted toward the major; approval for course selection from Justice Studies and the academic unit offering the course is also required.

Major Requirements Total: 41 Credit Hours

Recommended Schedule for Majors

First Year

JUST 200. Introduction to Justice Studies **Credits: 3.00**
MATH 220. Elementary Statistics [C3QR] **Credits: 3.00** (prerequisite for JUST 399) ¹
Foundation course *Credits: 3.00*

First Year Total: 9 Credit Hours

Second Year

Foundation courses *Credits: 6.00*
Justice Studies electives *Credits: 6.00*
Second Year Total: 12 Credit Hours

Third Year

JUST 100. Justice Studies Proseminar **Credits: 1.00**
JUST 399. Justice Research Methods **Credits: 4.00**
Fairness and Responsibility course *Credits: 3.00*
Justice Studies electives *Credits: 9.00*

Third Year Total: 17 Credit Hours

Fourth Year

JUST 400. Senior Seminar in Justice Studies **Credits: 3.00**
Justice Studies electives *Credits: 3.00*

Fourth Year Total: 6 Credit Hours

Footnote

¹ Can be counted for General Education, Cluster Three.

Program Total: 120 Credit Hours

Justice Studies, B.S.

Transfer Credit

A maximum of two courses may be transferred into the justice studies major from other institutions. No transfer credit will be given for any course offered in the major at the 300 or 400 level.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education courses ^{1,2}	41
Quantitative requirement (in addition to General Education) ²	3
Scientific literacy requirement (in addition to General Education)	3-4
Major requirements (core courses and selected concentrations)	41
Electives	28-35
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.
² MATH 220 (prereq for JUST 399) may count as either General Education or Quantitative requirement.

Major Requirements

Core Courses: 11 Credit Hours

JUST 100. Justice Studies Proseminar **Credits: 1.00**
JUST 200. Introduction to Justice Studies **Credits: 3.00**
JUST 399. Justice Research Methods **Credits: 4.00** ¹
JUST 400. Senior Seminar in Justice Studies **Credits: 3.00**

Footnote

¹ MATH 220 is a prerequisite for JUST 399.

Fairness and Responsibility Component Requirement: 3 Credit Hours

Take one of the following courses. Any course not used to fulfill this requirement may be used as elective credit.

JUST 328. Race, Class and Justice **Credits: 3.00**
JUST 339. Mapping Justice **Credits: 3.00**
JUST 341. Gender and Justice **Credits: 3.00**
JUST 354. Native Justice and Resistance **Credits: 3.00**
JUST 356. Refugees and Humanitarian Response **Credits: 3.00**
JUST 374. War and Justice **Credits: 3.00**
JUST 385. Disability and Justice **Credits: 3.00**

Choose one of the following foundation courses (which is not required for your concentration): 3 Credit Hours

JUST 210. Crime and Criminal Justice **Credits: 3.00**
JUST 212. Theories of Crime and Criminal Justice **Credits: 3.00**

JUST 221. Social Justice Theories **Credits: 3.00**
 JUST 223. Social Justice Interventions and Policies **Credits: 3.00**
 JUST 235. Justice in the Global Community **Credits: 3.00**
 JUST 237. Dilemmas in Global Justice **Credits: 3.00**

Total: 17 Credit Hours

Electives: 18 Credit Hours

Students select six additional courses from the following list. At least four of the six electives must have a JUST identifier.

Students may select only one of the following courses for elective credit: JUST 401, JUST 402, JUST 403, JUST 404, or JUST 405. Students should seek approval from their advisers or the department head.

CRJU 300. Ethics in Criminal Justice **Credits: 3.00**
 CRJU 321. Criminalistics **Credits: 3.00**
 CRJU 328. Criminal Procedure **Credits: 3.00**
 CRJU 329. Criminal Investigation and Evidence **Credits: 3.00**
 CRJU 335. Law Enforcement **Credits: 3.00**
 CRJU 337. Courts and the Judiciary **Credits: 3.00**
 CRJU 340. Administration of Justice **Credits: 3.00**
 HIST 338. U.S. Urban History **Credits: 3.00**
 JUST 300. Perspectives On Comparative Justice **Credits: 3.00**
 JUST 301. Advanced Level Special Topics in Justice Studies **Credits: 3.00**
 JUST 307. Justice and Crime **Credits: 3.00**
 JUST 309. Global Crime **Credits: 3.00**
 JUST 311. Women, Crime and Criminal Justice **Credits: 3.00**
 JUST 312. Mass and Serial Murder **Credits: 3.00**
 JUST 316. Human Development and Crime **Credits: 3.00**
 JUST 317. Victimization of Children **Credits: 3.00**
 JUST 318. Sex Offenders **Credits: 3.00**
 JUST 320. Organized Crime **Credits: 3.00**
 JUST 322. Understanding Violence and Nonviolence **Credits: 3.00**
 JUST 323. Comparative Criminal Justice **Credits: 3.00**
 JUST 324. Death Penalty **Credits: 3.00**
 JUST 326. Victimology **Credits: 3.00**
 JUST 327. Criminal Law **Credits: 3.00**
 JUST 328. Race, Class and Justice **Credits: 3.00**
 JUST 329. Perspectives on Law **Credits: 3.00**
 JUST 330. Corrections **Credits: 3.00**
 or
 SOWK 330. Corrections **Credits: 3.00**
 JUST 331. Human Rights in Theory and Practice **Credits: 3.00**
 or
 POSC 331. Human Rights in Theory and Practice **Credits: 3.00**
 JUST 334. Media and Justice **Credits: 3.00**
 JUST 339. Mapping Justice **Credits: 3.00**
 JUST 341. Gender and Justice **Credits: 3.00**
 JUST 343. Justice and Society **Credits: 3.00**
 JUST 345. Restorative Justice **Credits: 3.00**
 JUST 350. Justice and Globalization **Credits: 3.00**
 JUST 351. Building Democracy **Credits: 3.00**
 JUST 352. Global Migration **Credits: 3.00**
 JUST 353. Justice and Development **Credits: 3.00**

JUST 354. Native Justice and Resistance **Credits: 3.00**
 JUST 355. Solutions to Global Poverty **Credits: 3.00**
 JUST 356. Refugees and Humanitarian Response **Credits: 3.00**
 JUST 357. Environmental Justice **Credits: 3.00**
 JUST 361. Terrorism **Credits: 3.00**
 JUST 365. Justice in Literature, Film and Art **Credits: 3.00**
 JUST 372. Ethics and International Politics **Credits: 3.00**
 JUST 373. Rebuilding Post Conflict Societies **Credits: 3.00**
 JUST 374. War and Justice **Credits: 3.00**
 JUST 375. Genocide in the 20th Century **Credits: 3.00**
 JUST 376. Global Social Movements **Credits: 3.00**
 JUST 377. Global Futures **Credits: 3.00**
 JUST 385. Disability and Justice **Credits: 3.00**
 JUST 386. Sexual Orientation, Law and Justice **Credits: 3.00**

JUST 392. Peace Studies **Credits: 3.00**
 or
 POSC 392. Peace Studies **Credits: 3.00**

JUST 397. Legal Research and Information Literacy **Credits: 3.00**
 JUST 401. Internship in Justice Studies **Credits: 3.00**
 JUST 402. Advanced Research in Justice Studies **Credits: 3.00**
 JUST 403. Nelson Institute Seminar **Credits: 3.00**
 JUST 404. Practicum in Community-Based Research **Credits: 3.00**
 JUST 405. Research Assistantship in Justice Studies **Credits: 1.00 - 3.00**
 JUST 499. Honors **Credits: 1.00 - 3.00**
 PHIL 335. The Individual, the State, and Justice **Credits: 3.00**
 POSC 326. Civil Rights **Credits: 3.00**
 POSC 348. The Politics of Cultural Pluralism **Credits: 3.00**
 POSC 372. Ethics and International Politics **Credits: 3.00**
 POSC 383. Women and Politics in Comparative Perspective **Credits: 3.00**
 POSC 395. International Law **Credits: 3.00**
 POSC 396. International Organizations **Credits: 3.00**
 PSYC 310. The Psychology of Women and Gender **Credits: 3.00**
 PSYC 316. Human Development and Crime **Credits: 3.00**
 PSYC 320. Diversity Issues in Psychology **Credits: 3.00**
 PSYC 415. Forensic Psychology **Credits: 3.00**
 REL 322. Sociology of Religion **Credits: 3.00**
 REL 450. Religion and Society **Credits: 3.00**
 SCOM 332. Mediation **Credits: 3.00**
 SCOM 342. Argument and Advocacy **Credits: 3.00**
 SOCI 322. Sociology of Religion **Credits: 3.00**
 SOCI 336. Race and Ethnicity **Credits: 3.00**
 SOCI 338. U.S. Urban History **Credits: 3.00**
 SOCI 348. Introduction to Developing Societies **Credits: 3.00**
 SOCI 354. Social Inequality **Credits: 3.00**
 SOCI 367. Sociology of Sexuality **Credits: 3.00**

Justice Studies Concentrations

Concentration A: Criminal Justice and Criminology

This concentration focuses on the nature, causes and solutions for crime, primarily, but not exclusively, in the United States. All students in Concentration A must take both of these foundation courses: JUST 210 and

JUST 212. Students select six additional courses from the following. At least four of the six electives must have a JUST identifier.

Concentration A Electives

Note: Other courses may be substituted with adviser's and department chair's consent.

Select six additional courses from the following:

CRJU 300. Ethics in Criminal Justice **Credits: 3.00**
CRJU 321. Criminalistics **Credits: 3.00**
CRJU 328. Criminal Procedure **Credits: 3.00**
CRJU 329. Criminal Investigation and Evidence **Credits: 3.00**
CRJU 335. Law Enforcement **Credits: 3.00**
CRJU 337. Courts and the Judiciary **Credits: 3.00**
CRJU 340. Administration of Justice **Credits: 3.00**
JUST 301. Advanced Level Special Topics in Justice Studies **Credits: 3.00**¹
JUST 307. Justice and Crime **Credits: 3.00**
JUST 309. Global Crime **Credits: 3.00**
JUST 311. Women, Crime and Criminal Justice **Credits: 3.00**
JUST 312. Mass and Serial Murder **Credits: 3.00**

JUST 316. Human Development and Crime **Credits: 3.00**
or
PSYC 316. Human Development and Crime **Credits: 3.00**

JUST 317. Victimization of Children **Credits: 3.00**
JUST 318. Sex Offenders **Credits: 3.00**
JUST 320. Organized Crime **Credits: 3.00**
JUST 322. Understanding Violence and Nonviolence **Credits: 3.00**
JUST 324. Death Penalty **Credits: 3.00**
JUST 327. Criminal Law **Credits: 3.00**
JUST 329. Perspectives on Law **Credits: 3.00**

JUST 330. Corrections **Credits: 3.00**
or
SOWK 330. Corrections **Credits: 3.00**

JUST 334. Media and Justice **Credits: 3.00**
JUST 339. Mapping Justice **Credits: 3.00**
JUST 341. Gender and Justice **Credits: 3.00**
JUST 343. Justice and Society **Credits: 3.00**
JUST 345. Restorative Justice **Credits: 3.00**
JUST 357. Environmental Justice **Credits: 3.00**
JUST 361. Terrorism **Credits: 3.00**
JUST 365. Justice in Literature, Film and Art **Credits: 3.00**¹
JUST 385. Disability and Justice **Credits: 3.00**
JUST 386. Sexual Orientation, Law and Justice **Credits: 3.00**
JUST 397. Legal Research and Information Literacy **Credits: 3.00**
JUST 401. Internship in Justice Studies **Credits: 3.00**¹
JUST 402. Advanced Research in Justice Studies **Credits: 3.00**¹
JUST 403. Nelson Institute Seminar **Credits: 3.00**¹
JUST 404. Practicum in Community-Based Research **Credits: 3.00**¹
JUST 405. Research Assistantship in Justice Studies **Credits: 1.00 - 3.00**
PSYC 415. Forensic Psychology **Credits: 3.00**²

Concentration A Total: 18 Credit Hours

Concentration B: Global Justice and Policy

This concentration explores issues of justice in global context. Most prominent among them are questions of security, equity and equality. Courses address the individual, group and state dimensions of these and related issues in a diverse set of policy areas including democratization, cultural identity, developmental, environmental protection, conflict resolution and human rights.

Students in Concentration B must take both foundation courses: JUST 235 and JUST 237.

Students select six additional elective courses from the following. At least four must have a JUST identifier.

Concentration B Electives

Note: Other courses may be substituted with adviser's and department chair's consent.

Select six additional courses from the following:

JUST 301. Advanced Level Special Topics in Justice Studies **Credits: 3.00**¹
JUST 309. Global Crime **Credits: 3.00**
JUST 320. Organized Crime **Credits: 3.00**
JUST 324. Death Penalty **Credits: 3.00**

JUST 331. Human Rights in Theory and Practice **Credits: 3.00**
or
POSC 331. Human Rights in Theory and Practice **Credits: 3.00**

JUST 334. Media and Justice **Credits: 3.00**¹
JUST 339. Mapping Justice **Credits: 3.00**
JUST 341. Gender and Justice **Credits: 3.00**
JUST 345. Restorative Justice **Credits: 3.00**
JUST 350. Justice and Globalization **Credits: 3.00**
JUST 351. Building Democracy **Credits: 3.00**
JUST 352. Global Migration **Credits: 3.00**
JUST 353. Justice and Development **Credits: 3.00**
JUST 354. Native Justice and Resistance **Credits: 3.00**
JUST 355. Solutions to Global Poverty **Credits: 3.00**
JUST 356. Refugees and Humanitarian Response **Credits: 3.00**
JUST 357. Environmental Justice **Credits: 3.00**
JUST 361. Terrorism **Credits: 3.00**
JUST 365. Justice in Literature, Film and Art **Credits: 3.00**¹

JUST 372. Ethics and International Politics **Credits: 3.00**
or
POSC 372. Ethics and International Politics **Credits: 3.00**

JUST 373. Rebuilding Post Conflict Societies **Credits: 3.00**
JUST 374. War and Justice **Credits: 3.00**
JUST 375. Genocide in the 20th Century **Credits: 3.00**
JUST 376. Global Social Movements **Credits: 3.00**
JUST 377. Global Futures **Credits: 3.00**

JUST 385. Disability and Justice **Credits: 3.00**

JUST 386. Sexual Orientation, Law and Justice **Credits: 3.00**

JUST 392. Peace Studies **Credits: 3.00**

or

POSC 392. Peace Studies **Credits: 3.00**

JUST 397. Legal Research and Information Literacy **Credits: 3.00**

JUST 401. Internship in Justice Studies **Credits: 3.00**¹

JUST 402. Advanced Research in Justice Studies **Credits: 3.00**¹

JUST 403. Nelson Institute Seminar **Credits: 3.00**¹

JUST 404. Practicum in Community-Based Research **Credits: 3.00**¹

JUST 405. Research Assistantship in Justice Studies **Credits: 1.00 - 3.00**

MSCI 390. The Combat Experience **Credits: 3.00**

PHIL 335. The Individual, the State, and Justice **Credits: 3.00**

POSC 395. International Law **Credits: 3.00**

POSC 396. International Organizations **Credits: 3.00**

SCOM 332. Mediation **Credits: 3.00**

SCOM 342. Argument and Advocacy **Credits: 3.00**

SOCI 348. Introduction to Developing Societies **Credits: 3.00**

Any 300-level anthropology course that is centered on a world region (other than North America)³

Any 300-level history course that is centered on a world region (other than North America) and that includes coverage of the 20th century³

Any 300-level political science course that is regionally focused³

Any 300-level religion course with a contemporary and international focus

Concentration B Total: 18 Credit Hours

Concentration C: Social Justice Engagement

This concentration is designed to investigate what is fair, equitable and just for society. Emphasizing the oppression and liberation of vulnerable, exploited and marginalized populations, this curriculum promotes sustainable and just solutions to social, political and economic problems.

Students must take both of these foundation courses JUST 221 and JUST 223 .

Students select six additional elective courses from the following. At least four of the six electives must have a JUST identifier.

Concentration C Electives

Note: Other courses may be substituted with adviser's and department head's consent.

Choose from the following:

HIST 338. U.S. Urban History **Credits: 3.00**

or

SOCI 338. U.S. Urban History **Credits: 3.00**

JUST 301. Advanced Level Special Topics in Justice Studies **Credits: 3.00**¹

JUST 309. Global Crime **Credits: 3.00**

JUST 311. Women, Crime and Criminal Justice **Credits: 3.00**

JUST 322. Understanding Violence and Nonviolence **Credits: 3.00**

JUST 324. Death Penalty **Credits: 3.00**

JUST 334. Media and Justice **Credits: 3.00**¹

JUST 339. Mapping Justice **Credits: 3.00**

JUST 341. Gender and Justice **Credits: 3.00**

JUST 343. Justice and Society **Credits: 3.00**

JUST 352. Global Migration **Credits: 3.00**

JUST 354. Native Justice and Resistance **Credits: 3.00**

JUST 355. Solutions to Global Poverty **Credits: 3.00**

JUST 356. Refugees and Humanitarian Response **Credits: 3.00**

JUST 357. Environmental Justice **Credits: 3.00**

JUST 361. Terrorism **Credits: 3.00**

JUST 365. Justice in Literature, Film and Art **Credits: 3.00**

JUST 375. Genocide in the 20th Century **Credits: 3.00**

JUST 376. Global Social Movements **Credits: 3.00**

JUST 385. Disability and Justice **Credits: 3.00**

JUST 386. Sexual Orientation, Law and Justice **Credits: 3.00**

JUST 392. Peace Studies **Credits: 3.00**

or

POSC 392. Peace Studies **Credits: 3.00**

JUST 397. Legal Research and Information Literacy **Credits: 3.00**

JUST 401. Internship in Justice Studies **Credits: 3.00**¹

JUST 402. Advanced Research in Justice Studies **Credits: 3.00**¹

JUST 403. Nelson Institute Seminar **Credits: 3.00**¹

JUST 404. Practicum in Community-Based Research **Credits: 3.00**¹

JUST 405. Research Assistantship in Justice Studies **Credits: 1.00 - 3.00**

MSCI 390. The Combat Experience **Credits: 3.00**

POSC 326. Civil Rights **Credits: 3.00**

POSC 348. The Politics of Cultural Pluralism **Credits: 3.00**

POSC 383. Women and Politics in Comparative Perspective **Credits: 3.00**

PSYC 310. The Psychology of Women and Gender **Credits: 3.00**²

PSYC 320. Diversity Issues in Psychology **Credits: 3.00**

REL 322. Sociology of Religion **Credits: 3.00**

or

SOCI 322. Sociology of Religion **Credits: 3.00**

REL 371. Religion and Disability **Credits: 3.00**

REL 372. Religion and Medicine, East and West **Credits: 3.00**

REL 450. Religion and Society **Credits: 3.00**

SOCI 336. Race and Ethnicity **Credits: 3.00**

SOCI 354. Social Inequality **Credits: 3.00**

SOCI 367. Sociology of Sexuality **Credits: 3.00**

Concentration C Total: 18 Credit Hours

Footnotes

¹ May be taken for elective credit in Concentration A , Concentration B and Concentration C when the topic is appropriate. Students may select only one of the following for elective credit: JUST 401, JUST 402, JUST 403, JUST 404 or JUST 405. Students should seek approval from their advisers or the department head.

²Course is only open to students who are double majoring in Psychology.

³ Only one course from this option may be counted toward the major; approval for course selection from Justice Studies and the academic unit offering the course is also required.

Major Requirements Total: 41 Credit Hours

Recommended Schedule for Majors

First Year

JUST 200. Introduction to Justice Studies **Credits: 3.00**

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00** (prerequisite for JUST 399) ¹

Foundation course **Credits: 3.00**

First Year Total: 9 Credit Hours

Second Year

Foundation courses **Credits: 6.00**

Justice Studies electives **Credits: 6.00**

Second Year Total: 12 Credit Hours

Third Year

JUST 100. Justice Studies Proseminar **Credits: 1.00**

JUST 399. Justice Research Methods **Credits: 4.00**

Fairness and Responsibility course **Credits: 3.00**

Foundation course **Credits: 3.00**

Third Year Total: 17 Credit Hours

Fourth Year

JUST 400. Senior Seminar in Justice Studies **Credits: 3.00**

Justice Studies electives **Credits: 3.00**

Fourth Year Total: 6 Credit Hours

Footnote

¹ Can be counted for General Education, Cluster Three.

Program Total: 120 Credit Hours

Department of Kinesiology

Elizabeth Edwards, **Interim Academic Unit Head**

Phone: (540) 568-6145

Email: jmukinesiology@jmu.edu

Location: Godwin Hall, Room 307

Website: <http://www.jmu.edu/kinesiology>

Professors

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Associate Professors

L. Gano-Overway, T. Hargens, S. Kurti, C. McKay

Assistant Professor

E. Magrum

Instructors

C. Duncan, R. Lifka, J. Walters

Mission

The Department of Kinesiology is dedicated to the development of future leaders in professions that maximize the potential of individuals and society through physical activity. Programs include exercise science and teacher education in physical education and health.

The department is committed to:

Outstanding undergraduate programs based on the criteria of relevant professional associations which will enable graduates success in their professional endeavors.

Building upon the strong liberal studies background provided through General Education.

Developing professionals committed to engaging with diverse communities in ways that help all individuals reach their full potential.

Challenging students to think critically.

Using technological advances.

Appreciating the global community.

Providing quality graduate programs that complement the undergraduate programs and deliver advanced study in kinesiology.

Contributing to the university's General Education curriculum through programs designed to promote lifelong fitness and wellness.

Appreciating differences in perspective, identity and experience through cultivating class environments, curriculum and pre-professional opportunities that align with the spirit of inclusion.

Servicing JMU, the professions and local community through our unique knowledge and expertise.

Promoting effective practice in kinesiology through research and development projects that push back the boundaries of knowledge.

Career Opportunities and Marketable Skills

The exercise science concentration provides students with the opportunity to gain knowledge and applied experiences to enter fields such as:

Fitness Industry

Personal Trainers

Corporate Wellness/Fitness Directors

Health Care Industry (when combined with a pre-professional health minor)

Physical Therapy

Occupational Therapy

Physician Assistant
Medical School
Athletic Training
Cardiac Rehabilitation
Medical Technician

Additional opportunities

Exercise Physiologist
Nutrition and Exercise Specialist

Graduates completing the Physical and Health Education concentration provide students with the opportunity to gain knowledge and applied experiences to enter the field of teaching Health and Physical Education pre-K-12.

Graduates completing the Coaching Education Minor provide students with the opportunity to gain knowledge and applied experiences to enter fields such as:

Coaching youth and interscholastic teams
College/University coaching
Strength and Conditioning coaching

Coaching Education Minor

Minor Requirements

This minor provides students with the opportunity to gain knowledge and applied experiences to become competent sport coaches who have the tools to create a safe, fair and positive sport environment and promote holistic athlete development. . The Coaching Education minor is accredited by the National Committee for Accreditation of Coaching Education (NCACE) as a Level 3 coaching education program and is aligned with the National Standards for Sport Coaches.

To enroll in the internship, students must:

Successfully complete all of the other minor courses with a minimum grade of a "C";

Complete the Coaching Principles course through Human Kinetics and earn certification (part of KIN 205);

Present evidence of First Aid/CPR/AED certification, coaching certification in a particular sport, Child Abuse & Neglect training certification, and SafeSport certification or similar training; and

Have an overall GPA of 2.0 or above.

For successful completion of the minor, students must earn a minimum grade of a "C" in each of the six courses and a "satisfactory" in the internship (KIN 473).

Courses

ATEP 205. Introduction to Athletic Training **Credits: 3.00**

KIN 202. Biological Foundations of Kinesiology & Recreation **Credits: 3.00**

KIN 205. Introduction to Coaching **Credits: 3.00**

KIN 353. Maximizing Sports Performance **Credits: 3.00**

KIN 425. Concepts of Strength and Conditioning **Credits: 3.00**

KIN 450. Principles of Coaching Methods **Credits: 3.00**

KIN 473. Internship in Coaching **Credits: 3.00**

Total: 21 Credit Hours

Kinesiology, B.S.

Program Description

Students are advised to be certain they complete all General Education requirements before applying for graduation.

The kinesiology major program leads to the Bachelor of Science degree. Students are advised to familiarize themselves with the B.S. degree requirements.

Students who major in kinesiology work toward a B.S. degree by selecting and completing one of the following concentrations:

Exercise Science

Physical and Health Education Teacher Education

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement (in addition to General Education) ²	3
Scientific Literacy requirement (in addition to General Education) ²	3-4
Kinesiology Core Courses	12
Major, concentration and kinesiology elective requirements ³	55-67
University electives	6-21
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.

² Quantitative and scientific literacy requirements may be fulfilled with major required courses.

³ The number of credits taken to meet major and concentration requirements may vary if courses are double-counted for General Education.

Major Requirements

Required Courses: 12 Credit Hours

KIN 100. Lifetime Fitness and Wellness (2,2) [C5W] **Credits: 3.00**

KIN 202. Biological Foundations of Kinesiology & Recreation **Credits: 3.00**

KIN 303. Motor Development & Learning **Credits: 3.00**

Major, Concentration and Kinesiology Elective requirements: 55-67 Credit Hours

Kinesiology Concentrations

Exercise Science Concentration

The concentration prepares students to pursue careers in the fitness industry as well as graduate education in exercise science, pre-professional or an allied health field.

Students interested in athletic training, occupational therapy, physical therapy, medicine or other pre-professional health programs should review the Pre-Professional Health Advising section for prerequisite courses and recommendations for entrance to graduate professional health programs. Pre-professional health program coordinators are available to assist students with career planning and preparation.

Admission Policy

Any student can declare the exercise science concentration; however, students must apply to be fully admitted to the major for a limited number of spaces. Declaring the exercise science concentration does not guarantee full admission to the major.

To apply for admission to the exercise science concentration, students must complete the following prerequisite courses:

BIO 270/BIO 270L

BIO 290/BIO 290L

CHEM 131. General Chemistry I [C3PP] and CHEM 131L. General Chemistry Laboratory [C3L]

KIN 100. Lifetime Fitness and Wellness (2,2) [C5W]

KIN 202. Biological Foundations of Kinesiology & Recreation

Grades in the prerequisite courses are weighed heavily in the admission decision, and admission is offered to the top students on a space-available basis. Courses taken on a repeat/forgive basis will not be accepted. Only those grades received in prerequisite courses taken for the first time will be counted.

Applications are due October 15 for the spring semester and March 15 for summer and fall semester. Students denied admission may reapply during the next admission cycle.

Concentration Requirements

The following courses are required of all students who choose the exercise science concentration.

BIO 270. Human Physiology [C3NS] **Credits: 3.00 and**

BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**

BIO 290. Human Anatomy **Credits: 3.00 and**

BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00 and**

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

CHEM 132. General Chemistry II **Credits: 3.00**

KIN 302. Exercise Physiology **Credits: 3.00 and**

KIN 302L. Exercise Physiology Laboratory **Credits: 1.00**

KIN 306. Human Biomechanics **Credits: 3.00 and**

KIN 306L. Human Biomechanics Laboratory **Credits: 1.00**

KIN 321. Principles of Health Fitness Assessment **Credits: 3.00**

KIN 322. Fundamentals of Exercise Prescription **Credits: 3.00**

KIN 381. Practicum in Exercise Science **Credits: 3.00**

KIN 424. Exercise and Nutrition in Chronic Disease **Credits: 3.00**

KIN 426. Physical Activity Behaviors **Credits: 3.00**

KIN 481. Internship in Exercise Science **Credits: 4.00 - 12.00**

MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**¹

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

PHYS 140. College Physics I [C3PP] **Credits: 3.00 and**¹

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**¹

Footnote

¹ This course may be counted for both General Education and major degree requirements.

Departmental Electives

All students who choose the exercise science concentration are required to complete a minimum of six credits from the following courses:

KIN 305. Psychological Foundations of Kinesiology **Credits: 3.00**

KIN 325. Kinesiology Honors Research Prep **Credits: 3.00**

KIN 329. Social Aspects of Sport **Credits: 3.00**

KIN 422. Advanced Principles of Group Exercise Leadership **Credits: 3.00**

KIN 425. Concepts of Strength and Conditioning **Credits: 3.00**

KIN 428. Advanced Topics in Exercise Science and Leadership **Credits: 3.00**

KIN 429. Special Topics in Adapted Physical Education **Credits: 3.00**

KIN 430. Exercise Across the Lifespan **Credits: 3.00**

KIN 431. Environmental Exercise Physiology **Credits: 3.00**

KIN 432. Physiology of Endurance Performance **Credits: 3.00**

KIN 433. Exercise, Cardiovascular Disease and ECG Assessment **Credits: 3.00**

KIN 440. Exercise Immunology **Credits: 3.00**

KIN 490. Special Studies in Kinesiology and Recreation **Credits: 1.00 - 3.00**

Physical and Health Education Teacher Education Concentration

The Physical and Health Education Teacher Education (PHETE) concentration is committed to educating future leaders in the profession of teaching physical and health education. The program encourages the teacher candidate to advocate for effective educational changes, work collaboratively and collectively for social change, and to continue to grow professionally.

The PHETE concentration is a five-year Master of Arts in Teaching (M.A.T.) program. Upon successful completion of the first four years, students earn a Bachelor of Science (B.S.) degree in kinesiology. The fifth year M.A.T. degree provides the requisite courses to obtain a Virginia teaching license in Health and Physical Education (PreK-12). It is necessary to be admitted to the teacher education program prior to enrolling in professional education courses. For more information contact the PHETE coordinator, Susan Nye, Godwin Hall, Room 315, (540) 568-4865, nyesb@jmu.edu.

Admission Policy

The admission and retention standards are designed to instill a professional attitude and commitment to the profession of teaching. The admission and retention standards complement the JMU Teacher Education application process. The following outlines the admission and retention standards and procedures for PHETE.

PHETE Admission Standards

Full acceptance to the JMU Teacher Education Program

Submission of:

- Work Experience Verification Form
- Professional Resume
- Personal Statement

Demonstration and appreciation of professional dispositions

Successful completion of the following course work: BIO 290/BIO 290L, EDUC 200, PSYC 160*, KIN 244, KIN 303*, KIN 312*

Minimum Grades

* Minimum grade of "C" required in PSYC 160, KIN 303 and KIN 312

Concentration Requirements

Undergraduate Courses

BIO 290. Human Anatomy **Credits: 3.00 and**

BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

LED 420. Content Area Literacy, K-12 **Credits: 2.00**

KIN 100. Lifetime Fitness and Wellness (2,2) [C5W] **Credits: 3.00**

KIN 202. Biological Foundations of Kinesiology & Recreation **Credits: 3.00**

KIN 221. Skill Laboratory: Rhythmic and Dance Activities **Credits: 2.00**

KIN 222. Skill Laboratory: Teaching Fitness & Wellness in Schools **Credits: 2.00 - 10.00**

KIN 223. Skill Laboratory: Individual and Lifetime Activities **Credits: 2.00 - 10.00**

KIN 224. Skill Laboratory: Court & Field Games **Credits: 2.00**

KIN 225. Skill Laboratory: Wilderness & Adventure Education **Credits: 2.00 - 10.00**

KIN 303. Motor Development & Learning **Credits: 3.00**

KIN 305. Psychological Foundations of Kinesiology **Credits: 3.00**

KIN 309. School Health Content **Credits: 3.00**

KIN 310. Instructional Methods in Physical Education **Credits: 3.00**

KIN 311. Elementary Curriculum in Physical Education **Credits: 2.00**

KIN 312. The Profession of Teaching Health & Physical Education **Credits: 2.00**

KIN 313. Adapted Physical Education **Credits: 3.00**

KIN 314. Assessment in Elementary Physical Education **Credits: 3.00**

KIN 410. School Health Content for PHETE **Credits: 3.00**

KIN 411. Measurement and Evaluation in Kinesiology **Credits: 3.00**

KIN 480. Student Teaching in Physical Education **Credits: 8.00**

NUTR 280. Nutrition for Wellness **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

PHETE Concentration Requirement Total: 67 Credit Hours

Graduate Courses

KIN 511. Technology in Health and Physical Education **Credits: 3.00**

KIN 512. Instructional Methods in Middle and Secondary Physical Education **Credits: 3.00**

KIN 513. Professional Issues for Prospective Physical and Health Educators **Credits: 3.00**

KIN 514. Methods in School Health for PHETE **Credits: 3.00**

KIN 610. Curriculum Design and Development in Health and Physical Education **Credits: 3.00**

KIN 611. Teaching Diverse Populations in Health and Physical Education **Credits: 3.00**

KIN 612. Analysis of Teaching and Learning **Credits: 3.00**

KIN 683. Secondary Internship in Health and Physical Education **Credits: 6.00**

Choose one of the following: 3 Credit Hours

KIN 655. Research Techniques **Credits: 3.00**

EDUC 630. Inquiry in Education **Credits: 3.00**

Graduate Courses Total: 30 Credit Hours

Recommended Schedule for Majors

First Year

KIN 100. Lifetime Fitness and Wellness (2,2) [C5W] **Credits: 3.00**
General Education **Credits: 27.00**

First Year Total: 30 Credit Hours

Sophomore Year

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

KIN 202. Biological Foundations of Kinesiology & Recreation **Credits: 3.00**

KIN 305. Psychological Foundations of Kinesiology **Credits: 3.00**

BIO 290. Human Anatomy **Credits: 3.00 and**

BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

General Education courses **Credits: 8.00**

Electives **Credits: 7.00**

Sophomore Year Total: 30 Credit Hours

Junior Year – Fall Semester

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

KIN 224. Skill Laboratory: Court & Field Games **Credits: 2.00**

KIN 303. Motor Development & Learning **Credits: 3.00**

KIN 312. The Profession of Teaching Health & Physical Education **Credits: 2.00**

NUTR 280. Nutrition for Wellness **Credits: 3.00**

Elective **Credits: 3.00**

Junior Year – Fall Semester Total: 16 Credit Hours

Junior Year – Spring Semester

KIN 222. Skill Laboratory: Teaching Fitness & Wellness in Schools **Credits: 2.00 - 10.00**

KIN 225. Skill Laboratory: Wilderness & Adventure Education **Credits: 2.00 - 10.00**

KIN 309. School Health Content **Credits: 3.00**

KIN 411. Measurement and Evaluation in Kinesiology **Credits: 3.00**

LED 420. Content Area Literacy, K-12 **Credits: 2.00**

Electives **Credits: 4.00**

Junior Year – Spring Semester Total: 17 Credit Hours

Senior Year – Fall Semester

KIN 223. Skill Laboratory: Individual and Lifetime Activities **Credits: 2.00 - 10.00**

KIN 310. Instructional Methods in Physical Education **Credits: 3.00**

KIN 311. Elementary Curriculum in Physical Education **Credits: 2.00**

KIN 313. Adapted Physical Education **Credits: 3.00**

Elective **Credits: 3.00**

Senior Year – Fall Semester Total: 12 Credit Hours

Senior Year – Spring Semester

KIN 221. Skill Laboratory: Rhythmic and Dance Activities **Credits: 2.00**

KIN 314. Assessment in Elementary Physical Education **Credits: 3.00**

KIN 410. School Health Content for PHETE **Credits: 3.00**

KIN 480. Student Teaching in Physical Education **Credits: 8.00**

Senior Year – Spring Semester Total: 16 Credit Hours

Fifth Year – Summer Session I

KIN 511. Technology in Health and Physical Education **Credits: 3.00**

KIN 610. Curriculum Design and Development in Health and Physical Education **Credits: 3.00**

KIN 611. Teaching Diverse Populations in Health and Physical Education **Credits: 3.00**

Fifth Year – Summer Session I Total: 9 Credit Hours

Fifth Year – Fall Semester

KIN 512. Instructional Methods in Middle and Secondary Physical Education **Credits: 3.00**

KIN 514. Methods in School Health for PHETE **Credits: 3.00**

KIN 655. Research Techniques **Credits: 3.00**

Fifth Year – Fall Semester Total: 9 Credit Hours

Fifth Year – Spring Semester

KIN 513. Professional Issues for Prospective Physical and Health Educators **Credits: 3.00**

KIN 612. Analysis of Teaching and Learning **Credits: 3.00**

KIN 683. Secondary Internship in Health and Physical Education **Credits: 6.00**

Fifth Year – Spring Semester Total: 12 Credit Hours

Program Total: 120 Credit Hours

Department of Learning, Technology and Leadership Education

Michele Estes, **Interim Academic Unit Head**

Phone: (540) 568-8012

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Location: Memorial Hall, Room 3310B

Website: <http://www.jmu.edu/coe/tle>

Professors

E. Brantmeier, M. Estes, O. Griffin, D. Haraway, N. Sparkman-Key, P. Sullivan, W. White

Associate Professors

K. Wiley, B. Zugelder

Assistant Professors

J. Bywater, P. Chaudhuri, T. Coates, M. Smith-Woofter

Clinical Associate Instructors

R. Collins, C. Snead

Lecturer

R. Snow

The Department of Learning, Technology and Leadership Education houses undergraduate courses and minors, graduate certificates, and programs that prepare students for advanced learning in adult education and human resource development, educational leadership, educational technology, and teacher leadership. Students are prepared for careers in education in a wide range of professional settings.

Educational Media Minor

Coordinator: Hannah Smith

Phone: (540) 568-6274

Email: smit22hm@jmu.edu

The educational media minor prepares students for employment in education, business, communications, non-profit and consulting fields where the effective design of information, instruction and media are important. Students who minor in educational media will develop psychological and technological skills intended to enhance their major program of study and prepare them for the workplace. Students who successfully complete the minor will possess skills appropriate for teaching, training, designing instruction and developing related multimedia. Underlying theories and concepts integrated into the course work include but are not limited to the diffusion of information, learning theory, message design, group dynamics and materials evaluation.

The educational media minor requires a minimum of 18 credit hours selected in consultation with an adviser for this program.

Required Courses

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

LDT 150. Information in Contemporary Society **Credits: 3.00**

LDT 370. Instructional Technology **Credits: 3.00**

LDT 372. Visual Literacy **Credits: 3.00**

LDT 374. Photography for Learning **Credits: 1.00**

LDT 376. Video for Learning **Credits: 1.00**

LDT 378. Web Design for Learning **Credits: 1.00**

LDT 385. Foundations of Instructional Design **Credits: 3.00**

Total: 18 Credit Hours

Human Resource Development Minor

The HRD minor is an 18-credit hour applied program that prepares students to develop and implement professional development and performance improvement materials in a variety of organizational settings.

Human Resource Development Minor

Randy Snow, **Champion**

Phone: (540) 568-8842

Email: snowrs@jmu.edu

The human resource development minor prepares students to develop and implement professional development and performance improvement programs and materials in a variety of organizational settings.

The minor is designed to provide students from a wide variety of content disciplines additional experiences and skill bases to seek employment in public and private sectors in the fields of training and development and performance improvement.

Students who minor in human resource development must complete 18 hours of course work, including LDT 370. A student interested in this program must declare the minor prior to earning 75 credits.

Opportunities for HRD minors include development of the following:

job-specific skills in instructional design and delivery
curricular programs and materials
cognitive skills in problem-solving and critical thinking
program administration skills

Requirements

HRD 240. Introduction to Human Resource Development **Credits: 3.00**

HRD 245. Leadership in Organizational Settings **Credits: 3.00**

LDT 370. Instructional Technology **Credits: 3.00**

HRD 380. Performance and Task Analysis in Human Resource Development **Credits: 3.00**

HRD 480. Learning in Adulthood **Credits: 3.00**

HRD 485. Development of Materials and Programs **Credits: 3.00**

Total: 18 Credit Hours

Department of Management

Elizabeth Karam, **Department Head**

Phone: (540) 568-7461

Email: karamep@jmu.edu

Location: Zane Showker Hall, Room 4036

Website: <http://www.jmu.edu/cob/management>

Professors

S. Gallagher, L. Leduc, F. Mousa, M. Pattie, W. Ritchie, M. Rutherford

Associate Professors

E. Karam, C.K. Lee, D. Peterson, A. Shahzad, E. Stark

Assistant Professors

C. Bradley, S. Dmytriiev, K. Haensel, R. Ross

Senior Lecturers

R. Eliason, C. Hamilton, F. Pargas, C. Roeder, M. Yankey

Lecturers

S. Dodson, J. Lhospital, R. Walsh

Mission

The mission of the Department of Management is to provide students with a nationally competitive undergraduate education in the field of management studies. The Department of Management major prepares future organizational leaders to manage effectively in a dynamic global business environment. The Department of Management faculty strive to develop students' theoretical and practical managerial expertise, focusing on interpersonal and team skills, situational and data analysis, innovation and creativity, problem solving, evidence-based decision making, and ethical reasoning.

Goals

The overall goals of the Department of Management (MGT) program are:

To prepare graduates of the MGT major for a wide variety of management careers and leadership roles.

To provide instruction relating to the study and practice of management to undergraduate and graduate students in the College of Business.

Core Management Objectives

After studying management, students will possess an advanced understanding of:

The functions of management: Management majors will understand the basic managerial functions of planning, organizing, leading and controlling and how these functions are used to achieve organizational objectives in dynamic, culturally diverse and competitive global business environments.

The legal and ethical environment of management: Management majors will recognize and understand the behavioral implications of the ethical and legal boundaries of managerial decision making and subsequent actions.

Effective decision making and problem solving: Management majors will develop and enhance critical thinking, analytical and decision making skills. These skills will be demonstrated in students' ability to engage successfully in situational analysis, problem recognition, integration of information from diverse sources, use of logic and reasoning to develop solutions, and alternative courses of action, and implementation of action plans.

Organizational strategy and design: Management majors will be able to identify and explain elements of the internal and external environments that influence the formulation, implementation and evaluation of organizational strategy, structure and design.

Career Opportunities

- Project Manager
- Human Resources Generalist or Specialist
- Management Consultant
- Business Analyst
- Operations or Logistics Manager
- Supply Chain Analyst
- Labor Relations Specialist
- Small Business Owner/Manager
- Customer Service/Relations Manager
- Sales Manager
- Retail Manager
- Facility/Events Manager

Co-curricular Activities and Organizations

Sigma Iota Epsilon (SIE): National honors fraternity for management majors.

Society for Human Resource Management (SHRM): Student chapter of a national organization that provides students with opportunities to learn more about the field of human resource management through speakers, facility tours, networking and other activities.

Association for Supply Chain Management (APICS): JMU chapter of APICS, a national professional organization that provides research, education and

certification programs that foster supply chain excellence, innovation and resilience.

The JMU Society of Real Estate (SRE): A professional business organization that allows students to explore different facets of the real estate industry through speaker events, workshops, company site visits and other activities.

Business Management, B.B.A.

Program Description

The B.B.A. degree in business management requires a minimum of 120 credit hours of undergraduate work. The credit hour requirements for each of the program components are as follows:

Admission and Retention Requirements

College of Business Progression Standards

Any student admitted to JMU can declare any major offered by the College of Business. However, students must make satisfactory progress in order to be formally admitted into the College of Business. Requirements to continue pursuing a B.B.A. degree, often referred to as progression standards or formal admission, can be found on the College of Business catalog page.

Degree and Major Requirements

Required Courses	Credit Hours
General Education requirements ¹	41
B.B.A. lower-level core courses	27
B.B.A. upper-level core courses	18
Management major requirements	24
Electives	8-11
Total	120

Footnote

¹ The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.

Major Requirements

Students planning to major in business management must complete the 27-28 hours of lower-division B.B.A. core curriculum prior to enrolling in upper-division core courses normally taken in the first semester of their junior year. It is expected that the lower-division core curriculum will be completed during the first two years of study along with most of the university general education curriculum. Failing to complete all the lower-division core requirements on

time will delay enrollment in upper-division core and major courses. Because of the demands of group, team and outside of classroom applied assignments, students will not be allowed to enroll in more than four courses with a MGT prefix in any given semester.

Business management majors must choose one of the following options to complete the required eight courses in the MGT major:

Option 1: Five MGT core courses, one concentration and one elective

Option 2: Five MGT core courses and three MGT electives.

Required Core Courses

MGT 320. Management of Innovation and Technology **Credits: 3.00**

MGT 325. Project Management **Credits: 3.00**

MGT 357. Evidence-Based Decision Making **Credits: 3.00**

MGT 365. Fundamentals of Human Resource Management **Credits: 3.00**

MGT 390. Organizational Leadership **Credits: 3.00**

Major Requirements Total: 15 Credit Hours

B.B.A. Core Component

B.B.A. Lower-Level Core Component

B.B.A. majors must complete all of the B.B.A. core components as part of their degree program. The following courses comprise the B.B.A. Lower-Level Core Component:

COB 191. Business Analytics I **Credits: 3.00**¹

COB 202. Interpersonal Skills **Credits: 3.00**

COB 204. Computer Information Systems **Credits: 3.00**

COB 241. Financial Accounting **Credits: 3.00**

COB 242. Managerial Accounting **Credits: 3.00**^{4,5}

COB 291. Business Analytics II **Credits: 3.00**²

ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**

ECON 201. Introduction to Microeconomics **Credits: 3.00**

MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**³

or

MATH 235. Calculus I [C3QR] **Credits: 4.00**³

B.B.A. Upper-Level Core Component

The following courses comprise the B.B.A. Upper-Level Core Component:

COB 300A. Integrative Business: Management **Credits: 3.00**^{5,6}

COB 300B. Integrative Business: Finance **Credits: 3.00**^{5,6}

COB 300C. Integrative Business: Operations **Credits: 3.00**^{5,6}

COB 300D. Integrative Business: Marketing **Credits: 3.00**^{5,6}

COB 318. Legal and Ethical Environment of Business **Credits: 3.00**⁷

COB 487. Strategic Management **Credits: 3.00**⁸

Footnotes

¹ MATH 220 may be substituted for COB 191.

² COB 191 or equivalent and MATH 205 or equivalent are prerequisites for COB 291.

³ Calculus is required but not used in calculating the B.B.A. core GPA. Students may substitute MATH 231, MATH 233 or ISAT 151 to fulfill the calculus requirement. MATH 235 is preferred for Economics and Finance majors.

⁴ COB 241 must be taken before COB 242.

⁵ COB 242 is a prerequisite for COB 300 but is not used in calculating the B.B.A. core GPA.

⁶ All four COB 300 courses must be taken during the same semester.

⁷ COB 300 is a prerequisite or corequisite for COB 318. COB 318 is a prerequisite for COB 487 and BLAW 497.

⁸ COB 487 must be taken during the senior year.

Concentrations

Human Resource Management Concentration

The human resource management (HRM) concentration is designed to help students broaden and deepen their understanding of the acquisition, development, management and retention of human capital in organizations. This focus area is suggested for students who intend to work in human resource (HR) generalist or specialist positions, students planning on a career in labor relations or employment law, students who plan to start or manage a business, and students who want to attend graduate school in an HR-related field. MGT 365 is considered the first course in this concentration.

Required Courses

MGT 470. Acquiring and Developing Human Capital **Credits: 3.00**

MGT 475. Managing and Retaining Human Capital **Credits: 3.00**

Human Resource Management Concentration Total: 6 Credit Hours

Innovation and Entrepreneurship Concentration

The innovation and entrepreneurship (ENT1) concentration is designed to provide students with an introduction to the role of innovation in business development, a solid foundation in the principle elements of entrepreneurship and small business management, and the opportunity to gain hands-on experience working with a team to create a new business venture. This focus area is suggested for students interested in creating and managing a new business venture, students intending to work for larger firms that encourage innovation and intrapreneurship, and students planning to work in small or family run businesses. MGT 320 is considered the first course in this concentration.

Required Courses

MGT 471. Entrepreneurship and Small Business Management **Credits: 3.00**

MGT 472. New Venture Creation **Credits: 3.00**

Innovation and Entrepreneurship Concentration Total: 6 Credit Hours

Management Consulting Concentration

The management consulting concentration is designed to develop and enhance students' critical thinking, problem solving and decision-making skills. In this concentration students engage in research and analysis to build a strong foundation for learning and implementing the business analysis and consulting process. This focus area is suggested for students interested in working as a business analyst, consultant or solutions manager, or in any position that requires strong analytical and problem-solving skills. MGT 357 is considered the first course in this concentration.

Required Courses

MGT 457. Management Consulting Fundamentals **Credits: 3.00**

MGT 467. Advanced Management Consulting **Credits: 3.00**

**Innovation and Entrepreneurship Concentration Total:
6 Credit Hours**

Recommended Schedule for Majors

Third Year - First Semester

For all Business Management, B.B.A students.

COB 300A. Integrative Business: Management **Credits: 3.00**

COB 300B. Integrative Business: Finance **Credits: 3.00**

COB 300C. Integrative Business: Operations **Credits: 3.00**

COB 300D. Integrative Business: Marketing **Credits: 3.00**

General Education or elective **Credits: 3.00**

Third Year - First Semester Total: 15 Credit Hours

Recommended Schedule for Business Management Majors

Third Year - Second Semester

COB 318. Legal and Ethical Environment of Business **Credits: 3.00**

General Education or electives **Credits: 6.00**

Three of the following MGT core requirements: 9 Credit Hours

MGT 320. Management of Innovation and Technology **Credits: 3.00**

MGT 325. Project Management **Credits: 3.00**

MGT 357. Evidence-Based Decision Making **Credits: 3.00**

MGT 365. Fundamentals of Human Resource Management **Credits: 3.00**

MGT 390. Organizational Leadership **Credits: 3.00**

Third Year - Second Semester Total: 18 Credit Hours

Fourth Year

COB 487. Strategic Management **Credits: 3.00**

Remaining two of five MGT core course requirements **Credits: 6.00**

General Education or electives as needed.

Choose one: 9 Credit Hours

Option 1: One concentration (two courses) plus one MGT elective **Credits: 9.00**

Option 2: Three MGT electives. **Credits: 9.00**

Fourth Year Total:

Recommended Schedule for Human Resource Management Concentration

Third Year - Second Semester

COB 318. Legal and Ethical Environment of Business **Credits: 3.00**

MGT 365. Fundamentals of Human Resource Management **Credits: 3.00**

General Education or electives **Credits: 6.00**

Two of the following core requirements: 6 Credit Hours

MGT 320. Management of Innovation and Technology **Credits: 3.00**

MGT 325. Project Management **Credits: 3.00**

MGT 357. Evidence-Based Decision Making **Credits: 3.00**

MGT 390. Organizational Leadership **Credits: 3.00**

Third Year - Second Semester Total: 18 Credit Hours

Fourth Year

COB 487. Strategic Management **Credits: 3.00**

MGT 470. Acquiring and Developing Human Capital **Credits: 3.00**

MGT 475. Managing and Retaining Human Capital **Credits: 3.00**

Remaining two of five MGT core course requirements **Credits: 6.00**

One MGT elective course **Credits: 3.00**

General Education or electives as needed.

Fourth Year Total:

Recommended Schedule for Innovation and Entrepreneurship Concentration

Third Year - Second Semester

MGT 320. Management of Innovation and Technology **Credits: 3.00**

General Education or electives **Credits: 6.00**

Two of the following MGT core requirements: 6 Credit Hours

MGT 325. Project Management **Credits: 3.00**

MGT 357. Evidence-Based Decision Making **Credits: 3.00**

MGT 365. Fundamentals of Human Resource Management **Credits: 3.00**

MGT 390. Organizational Leadership **Credits: 3.00**

Third Year - Second Semester Total: 15 Credit Hours

Fourth Year

COB 487. Strategic Management **Credits: 3.00**

MGT 471. Entrepreneurship and Small Business Management **Credits: 3.00**

MGT 472. New Venture Creation **Credits: 3.00**

Remaining two of five MGT core course requirements *Credits: 6.00*

One MGT elective *Credits: 3.00*

General Education or electives as needed.

Fourth Year Total:

Recommended Schedule for Management Consulting Concentration

Third Year - Second Semester

COB 318. Legal and Ethical Environment of Business **Credits: 3.00**

MGT 357. Evidence-Based Decision Making **Credits: 3.00**

General Education or electives *Credits: 6.00*

Two of the following MGT core requirements: 6 Credit Hours

MGT 320. Management of Innovation and Technology **Credits: 3.00**

MGT 325. Project Management **Credits: 3.00**

MGT 365. Fundamentals of Human Resource Management **Credits: 3.00**

MGT 390. Organizational Leadership **Credits: 3.00**

Third Year - Second Semester Total: 18 Credit Hours

Fourth Year

COB 487. Strategic Management **Credits: 3.00**

MGT 457. Management Consulting Fundamentals **Credits: 3.00**

MGT 467. Advanced Management Consulting **Credits: 3.00**

Remaining two of five MGT core course requirements *Credits: 6.00*

One MGT elective *Credits: 3.00*

Fourth Year Total: 18 Credit Hours

Program Total: 120 Credit Hours

Department of Marketing

Theresa B. Clarke, **Academic Unit Head**

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Assistant Professors

A. Anwar, G. Atav, C. Kim, K. Naletelich

Senior Lecturers

R. McMillen, C. Snyder

Lecturers

C. Collins, L. King, S. Kozak, B. Rhodes, A. Strunk, R. Tate

Mission

The marketing department's mission is to develop highly successful marketing professionals who deliver exceptional value to their customers, employers and communities and to advance the practice of marketing through academic and professional engagement.

The marketing curriculum focuses on traditional and emerging marketing skills needed in various business settings and industries. The curriculum seeks to develop competence in five areas: factual and conceptual knowledge, problem-solving skills, communication skills, experiential learning and the use of information technology. Students will be prepared to enter corporate, small business or not-for-profit environments with highly valued skills and an understanding of the need for continuous learning.

Marketing students may select an optional concentration in **Digital Marketing** or **Professional Sales**.

Goals

To deliver a solid foundation of the concepts and theories of the marketing discipline, including market environmental issues; strategic market planning, implementation, and evaluation; marketing research; buyer behavior and market segmentation; and development of marketing programs.

To engage students in critical thinking processes, requiring an in-depth analysis of qualitative and quantitative market data and the development of subsequent marketing strategies based on this analysis.

To enable students to evaluate marketing alternatives and commit to a course of action, using financial, organizational, environmental and ethical criteria as bases for decision making.

To teach students a variety of information technology tools and techniques to improve marketing and overall business performance and deliver greater value to customers.

To facilitate students' continuing development of listening, writing and oral communication skills.

To develop students' marketing-based interpersonal skills, such as group-based negotiation, consensus building, delegation and performance evaluation.

To integrate classroom study with exposure to industry practices throughout the marketing curriculum and ensure marketing students access to experiential learning opportunities in marketing career tracks.

To introduce students to the fundamentals of professional selling and develop students' interpersonal communication skills through face-to-face role-play scenarios.

Career Opportunities

Consumer marketing and business-to-business marketing: market analysis, product development, services marketing, global marketing and customer relationship management.

Digital marketing: search engine marketing, search engine optimization, mobile marketing, digital account management, content marketing, social media marketing and marketing analytics.

Marketing research: database management, market research analyst and project management.

Not-for-profit marketing: fund-raising, direct marketing and customer service.

Product/Brand management: product specialist, channel development and promotional marketing.

Retailing: store management, merchandise buying, trend analysis, omnichannel retail management and visual merchandising.

Professional sales: Product and service sales positions across a broad range of companies and industries as sales development representatives, account managers, inside sales representatives and outside sales representatives.

Co-curricular Activities and Organizations

AMA. This student club is affiliated with the American Marketing Association, a national marketing organization for marketing professionals, faculty, and students. AMA is open to all JMU students. AMA is comprehensive with its marketing programming and offers students information and activities in marketing management.

DECA. Collegiate DECA is a student-driven business organization that values competence, innovation, integrity, and teamwork. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality, and management.

Delta Mu Sigma. DMS is a newly established honor society dedicated to the commitment of growth, innovation, and integrity of digital marketing scholarship and practice. The society hosts guest speakers and networking events with digital marketing professionals. Admission is by application only.

Mu Kappa Tau. M.K.T. is an honorary marketing society for students with high collegiate scholastic records. Admission is by invitation only.

Pi Sigma Epsilon. PSE is a national, professional co-ed business fraternity that focuses on programming and extracurricular experiences in marketing, personal selling, and sales management.

Professional Sales Club. This organization strives to help all students interested in sales and give them the knowledge and skills they need to be successful in a professional sales role.

Scratch Pad (Ad Club). Scratch Pad is JMU's only student advertising club and a student chapter of the American Advertising Federation (AAF). This organization competes in the National Student Advertising Competition each year.

Transfer Credit Policy

The marketing program will accept no more than two courses for transfer credit toward the major. These courses must be from AACSB institutions. In addition to this general **College of Business** policy, there are restrictions on which courses will be accepted for transfer credit.

Students must take the following courses at JMU:

MKTG 482. Marketing Analytics
MKTG 485. Marketing Management

Marketing, B.B.A.

Program Description

Marketing majors conform to the general structure of the B.B.A. degree program. The B.B.A. degree in marketing requires a minimum of 120 credit hours of undergraduate course work.

Admission and Retention Requirements

College of Business Progression Standards

Any student admitted to JMU can declare any major offered by the College of Business. However, students must make satisfactory progress in order to be formally admitted into the College of Business. Requirements to continue pursuing a B.B.A. degree, often referred to as progression standards or formal admission, can be found on the College of Business catalog page.

Degree and Major Requirements

Degree and Major Requirements	Credit Hours
General Education requirements ¹	41
B.B.A. lower-level core courses ²	27-28
B.B.A. upper-level core courses	18
Marketing major requirements	27
Electives	7-13
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.

Major Requirements

Students planning to major in marketing must complete the 27-28 hour, lower-level B.B.A. core requirements (see the College of Business section for the list

of courses) prior to enrolling in upper-level B.B.A. core and marketing courses. Upper-level courses normally begin in the first semester of the junior year. The lower-level core curriculum should be completed during the first two years of study along with most of the university General Education curriculum. Failing to complete all lower-level core requirements on time will delay enrollment in upper-level core and major courses. The following upper-level B.B.A. core courses are required: COB 300A, COB 300B, COB 300C, and COB 300D; COB 318; and COB 487.

Marketing Curriculum Required Core Courses: 15 Credit Hours

The marketing curriculum consists of 27 credit hours in marketing. The required courses equip students with the knowledge and skills all marketers should have. Elective courses allow students to pursue areas of special interest and prepare for specific career tracks in marketing. Students may choose to complete an optional concentration in Professional Sales or Digital Marketing.

MKTG 384. Integrated Marketing Communications **Credits: 3.00**
 MKTG 385. Consumer Behavior **Credits: 3.00**
 MKTG 430. Professional Selling **Credits: 3.00**
 MKTG 482. Marketing Analytics **Credits: 3.00**
 MKTG 485. Marketing Management **Credits: 3.00**

Concentration and Elective Courses: 12 Credit Hours

Major Requirements Total: 27 Credit Hours

Marketing Electives: 12 Credit Hours

Choose four:

MKTG 386. Services Marketing **Credits: 3.00**
 MKTG 388. Omnichannel Retailing **Credits: 3.00**²
 MKTG 410. Social Media Marketing **Credits: 3.00**
 MKTG 450. Business Marketing **Credits: 3.00**
 MKTG 455. Sales Leadership **Credits: 3.00**¹
 MKTG 460. Global Marketing **Credits: 3.00**
 MKTG 462. International Logistics **Credits: 3.00**
 MKTG 465. CRM Technology for Sales Professionals **Credits: 3.00**¹
 MKTG 466. Advanced Professional Selling **Credits: 3.00**¹
 MKTG 470. Strategic Internet Marketing **Credits: 3.00**²
 MKTG 477. Digital Marketing Practicum **Credits: 3.00**²
 MKTG 480. Product Development and Management **Credits: 3.00**
 MKTG 490. Special Studies in Marketing **Credits: 1.00 - 3.00**
 MKTG 494. Marketing Internship **Credits: 3.00 - 6.00**
 MKTG 498. Special Topics in Marketing **Credits: 1.00-3.00**
 MKTG 499C. Senior Honors Project **Credits: 3.00**

Footnotes

¹ MKTG 455, MKTG 465, and MKTG 466 are sales-focused marketing electives applied toward the professional sales concentration.

² MKTG 410, MKTG 470 and MKTG 477 are digital marketing-focused marketing electives applied toward the digital marketing concentration.

B.B.A. Core Component

B.B.A. Lower-Level Core Component

B.B.A. majors must complete all of the B.B.A. core components as part of their degree program. The following courses comprise the B.B.A. Lower-Level Core Component:

COB 191. Business Analytics I **Credits: 3.00**¹
 COB 202. Interpersonal Skills **Credits: 3.00**
 COB 204. Computer Information Systems **Credits: 3.00**
 COB 241. Financial Accounting **Credits: 3.00**
 COB 242. Managerial Accounting **Credits: 3.00**^{4,5}
 COB 291. Business Analytics II **Credits: 3.00**²
 ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**
 ECON 201. Introduction to Microeconomics **Credits: 3.00**
 MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**³
 or
 MATH 235. Calculus I [C3QR] **Credits: 4.00**³

B.B.A. Upper-Level Core Component

The following courses comprise the B.B.A. Upper-Level Core Component:

COB 300A. Integrative Business: Management **Credits: 3.00**^{5,6}
 COB 300B. Integrative Business: Finance **Credits: 3.00**^{5,6}
 COB 300C. Integrative Business: Operations **Credits: 3.00**^{5,6}
 COB 300D. Integrative Business: Marketing **Credits: 3.00**^{5,6}
 COB 318. Legal and Ethical Environment of Business **Credits: 3.00**⁷
 COB 487. Strategic Management **Credits: 3.00**⁸

Footnotes

¹ MATH 220 may be substituted for COB 191.

² COB 191 or equivalent and MATH 205 or equivalent are prerequisites for COB 291.

³ Calculus is required but not used in calculating the B.B.A. core GPA. Students may substitute MATH 231, MATH 233 or ISAT 151 to fulfill the calculus requirement. MATH 235 is preferred for Economics and Finance majors.

⁴ COB 241 must be taken before COB 242.

⁵ COB 242 is a prerequisite for COB 300 but is not used in calculating the B.B.A. core GPA.

⁶ All four COB 300 courses must be taken during the same semester.

⁷ COB 300 is a prerequisite or corequisite for COB 318. COB 318 is a prerequisite for COB 487 and BLAW 497.

⁸ COB 487 must be taken during the senior year.

Concentrations

Digital Marketing Concentration

The emerging digital marketing sector is attracting marketing graduates interested in paid search, display advertising, marketing analytics, search engine optimization, content marketing, mobile marketing, email marketing and social media. Students who graduate with the digital marketing concentration will understand the foundational theory and best practices related to driving website traffic and making data-driven decisions. Students will be prepared to complete industry-recognized certifications within the digital marketing electives and will be encouraged to complete other external certifications that relate to their career goals. Students will learn to use appropriate industry tools for the classes in which they enroll such as website builders, email service providers, content creation tools, social media planning dashboards and keyword planning tools. Students will learn the development process for digital marketing platforms and to connect the creation of materials to marketing strategies and measurable objectives. After completing the concentration, students will have an understanding of the use of digital marketing in contributing to the overall achievement of the organization's business objectives. Courses in this concentration build on the content of MKTG 384. Students should complete this course as soon as possible after completing COB 300.

Required Marketing Courses: 15 Credit Hours

Digital Marketing-Focused Electives: 12 Credit Hours

Complete twelve credits through one of the following paths below.

MKTG 410. Social Media Marketing **Credits: 3.00**

MKTG 470. Strategic Internet Marketing **Credits: 3.00**

MKTG 477. Digital Marketing Practicum **Credits: 3.00**

Digital Marketing Path 1:

Three digital marketing-focused marketing electives (nine credits) and one other marketing elective (three credits)

Digital Marketing Path 2:

Two digital marketing-focused marketing electives (six credits) and two other marketing electives (six credits)

Digital Marketing Concentration Total: 27 Credit Hours

Professional Sales Concentration

This concentration prepares students for careers in sales that focus on business customers and, in most cases, on the selling of relatively complex and technical products and services.

Courses in this concentration build on the content of MKTG 430. Students should complete this course as soon as possible after completing COB 300.

Required Marketing Courses: 15 Credit Hours

Sales-Focused Marketing Electives: 12 Credit Hours

Complete twelve credits through one of the following paths below. MKTG 466 is required for students pursuing the sales concentration.

MKTG 455. Sales Leadership **Credits: 3.00**

MKTG 465. CRM Technology for Sales Professionals **Credits: 3.00**

Professional Sales Path 1:

MKTG 466. Advanced Professional Selling **Credits: 3.00**

Two sales-focused marketing electives *Credits: 6.00*

One other marketing elective *Credits: 3.00*

Professional Sales Path 2:

MKTG 466. Advanced Professional Selling **Credits: 3.00**

One sales-focused marketing elective *Credits: 3.00*

Two other marketing electives *Credits: 6.00*

Professional Sales Concentration Total: 27 Credit Hours

Recommended Schedule for Majors

Marketing majors should follow the course schedule below to complete the final two years of their program. It is possible to deviate from this schedule but care must be taken to ensure that all course prerequisites are met.

Third Year - First Semester

COB 300A. Integrative Business: Management **Credits: 3.00**

COB 300B. Integrative Business: Finance **Credits: 3.00**

COB 300C. Integrative Business: Operations **Credits: 3.00**

COB 300D. Integrative Business: Marketing **Credits: 3.00**

Electives *Credits: 3.00*

Third Year - First Semester Total: 15 Credit Hours

Third Year - Second Semester

MKTG 384. Integrated Marketing Communications **Credits: 3.00**

MKTG 385. Consumer Behavior **Credits: 3.00**

MKTG 430. Professional Selling **Credits: 3.00**

COB 318. Legal and Ethical Environment of Business **Credits: 3.00**

Electives *Credits: 3.00*

Third Year - Second Semester Total: 15 Credit Hours

Recommended Schedule for Marketing Majors (No Concentration)

Fourth Year - First Semester

MKTG 482. Marketing Analytics **Credits: 3.00**

Required marketing courses not completed junior year *Credits: 3.00*
Marketing electives *Credits: 9.00*
Electives as needed *Credits: 1.00-6.00*

Fourth Year - First Semester Total:

Fourth Year - Second Semester

COB 487. Strategic Management **Credits: 3.00**
or
Elective as needed *Credits: 1.00-6.00*

MKTG 485. Marketing Management **Credits: 3.00**
Marketing electives *Credits: 3.00*

Fourth Year - Second Semester Total:

Recommended Schedule for the Digital Marketing Concentration

Marketing majors pursuing a concentration in Digital Marketing should follow the course schedule below to complete the final two years of their program. It is possible to deviate from this schedule but care must be taken to ensure that all course prerequisites are met. In order to meet the requirements of the Digital Marketing Concentration, students should complete MKTG 384 in the semester immediately following the successful completion of CoB 300.

The recommended schedule for the fourth-year below is based on Path 1 by completing three Digital Marketing-focused electives (9 Credit Hours) and one Marketing elective (3 Credit Hours). Students may pursue Path 2 to fulfill Digital Marketing concentration requirements by completing two Digital Marketing-focused electives (6 Credit Hours) and two Marketing electives (6 Credit Hours).

Fourth Year - First Semester

MKTG 410. Social Media Marketing **Credits: 3.00**
MKTG 470. Strategic Internet Marketing **Credits: 3.00**
MKTG 482. Marketing Analytics **Credits: 3.00**
Marketing elective *Credits: 3.00*
Electives as needed *Credits: 1.00-6.00*

Fourth Year - First Semester Total: 15 Credit Hours

Fourth Year - Second Semester

COB 487. Strategic Management **Credits: 3.00**
MKTG 477. Digital Marketing Practicum **Credits: 3.00**
MKTG 485. Marketing Management **Credits: 3.00**
Electives as needed *Credits: 1.00-6.00*

Fourth Year - Second Semester Total: 12-15 Hours

Recommended Schedule for the Professional Sales Concentration

Marketing majors pursuing a concentration in Professional Sales should follow the course schedule below to complete the final two years of their program. It is possible to deviate from this schedule but care must be taken to ensure that all course prerequisites are met. In order to meet the requirements of the Professional Sales Concentration, students should complete MKTG 430 in the semester immediately following the successful completion of COB 300.

The recommended schedule for the fourth-year below is based on Path 1. Students may pursue Path 2 to fulfill Professional Sales concentration requirements by replacing MKTG 455 or MKTG 465 with a Marketing elective.

Fourth Year - First Semester

MKTG 466. Advanced Professional Selling **Credits: 3.00**
MKTG 482. Marketing Analytics **Credits: 3.00**
Marketing elective *Credits: 3.00*
Electives as needed *Credits: 1.00-6.00*
Sales-focused marketing elective *Credits: 3.00*

Fourth Year - First Semester Total: 15 Credit Hours

Fourth Year - Second Semester

COB 487. Strategic Management **Credits: 3.00**
MKTG 485. Marketing Management **Credits: 3.00**
Electives as needed *Credits: 1.00-6.00*
Sales-focused marketing elective *Credits: 3.00*

Fourth Year - Second Semester Total: 15 Credit Hours

Program Total: 120 Credit Hours

Department of Mathematics and Statistics

Krishnan "Ravi" Shankar, **Department Head**

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Senior Lecturers

A. Casiple, C. Watson

Lecturers

S. Berry, J. Gibson, D. Hall, R. Koch, S. Palliyage, E. Ward

Mission

The Department of Mathematics and Statistics provides a program of study in the mathematical sciences that meets the needs of a wide variety of students and makes a continuing contribution to the advancement of mathematical and statistical knowledge and its dissemination. The program provides opportunities for in-depth study that can lead to careers as analysts, mathematicians and statisticians in private and public sectors, teachers of mathematics, and further study in graduate school. The program provides support for the mathematical and statistical needs of students in the natural sciences, integrated sciences, social sciences, and professional and pre-professional programs. The program meets the general education needs of all students, providing an understanding of mathematical and statistical thinking and approaches to problem solving.

We are committed to promoting mathematics and statistics as an art of human endeavor as well as a fundamental method of inquiry into the sciences and a vast array of other disciplines. We are committed to encouraging an attitude of appreciation and support for mathematics and statistics in current university students and, through them, the next generation of citizens. We are also committed to fostering an appreciation for the effective use of applied mathematics and statistics in connection with and support of other disciplines for those students majoring in other subjects.

Goals

As a major in mathematics or statistics, a student can expect to use and build on skills such as:

Thinking critically

Formulating and solving problems

Communicating solutions clearly, both orally and in writing

These skills have been gained in previous courses in mathematics, statistics and other areas. As the breadth of knowledge of the subject grows, students gain an increased understanding and appreciation of the fact that mathematics is truly a universal language whose creation and applications cut across all boundaries of race, class, culture and time.

There also will be opportunities for students to experience the challenges and rewards of faculty-mentored research, individually or as a member of a team, as they investigate mathematical and statistical problems that extend beyond those normally encountered in the classroom. Students increase their abilities to prove theorems, understand complex structures and apply mathematics and statistics in many real-world settings. The program students choose will make it

possible for them to acquire strong preparation for professional applications in mathematics and statistics, teaching, natural and social sciences or other technical areas, and for graduate work.

Programs

The Department of Mathematics and Statistics offers the B.A. and B.S. degrees with a major in mathematics and the B.S. degree with a major in statistics.

There is a program for a major in mathematics that qualifies a student for initial teaching licensure. Minors are offered in mathematics, statistics, computational analytics and data analytics.

The department also recognizes the importance of providing courses for non-specialists who need to make effective use of mathematics or statistics in their chosen careers.

The university is an institutional/educational member of the **American Mathematical Society**, the **American Statistical Association**, the **Mathematical Association of America** and the **Society for Industrial and Applied Mathematics**.

Students are strongly encouraged to participate in the numerous undergraduate research opportunities as well as individual and small group projects available in the department. Opportunities exist through the Center for Computational Mathematics and Modeling, the JMU Experimental Mathematics Lab, the **Statistical Consulting Center**, honors theses and independent studies with individual faculty mentors.

Majors in the department are expected to participate in assessment activities. Assessment information is used to assist faculty members in modifying curricula.

Mathematics, B.A.

Program Description

The mathematics major provides a program of study with core fundamentals along with electives that prepare students for a wide variety of careers, including jobs in industry, careers in teaching and further study in graduate school. The core courses provide a solid foundation of critical thinking and mathematical concepts, while the various elective courses provide a breadth of knowledge in relevant topics. Our diverse faculty have research interests in a number of mathematical disciplines, and provide undergraduate research opportunities in those disciplines beyond the course requirements for the major.

Credit by Examination

The Department of Mathematics offers credit by examination for some of the courses taught in the department. Students who want to take an examination must apply to the department head. Upon application students will receive details regarding approval to take the examination.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ^{1,2}	41
Foreign Language classes (intermediate level required)	0-14
Philosophy course (in addition to General Education)	3
University electives	19-35
Major requirements (listed below)	41-45
Total	120

Footnotes

¹ MATH 231 or MATH 235 must be included and students seeking secondary teaching licensure must include PSYC 160.

² The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

Major Requirements

Mathematics requirements depend on whether or not the student is seeking secondary teaching licensure. All students must complete 29-33 credit hours of the following required core mathematics courses and 12 credit hours of mathematics courses beyond the core.

Core Courses Required of All Majors

MATH 236. Calculus II **Credits: 4.00**
MATH 237. Calculus III **Credits: 4.00**
MATH 245. Discrete Mathematics **Credits: 3.00**
MATH 248. Computers and Numerical Algorithms **Credits: 4.00**
MATH 300. Linear Algebra **Credits: 3.00 and**
MATH 336. Elementary Differential Equations **Credits: 3.00** ¹
MATH 410. Advanced Calculus I **Credits: 3.00**
MATH 430. Abstract Algebra I **Credits: 3.00**

Choose one of the following:

MATH 318. Introduction to Probability and Statistics **Credits: 4.00**
or
MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00 and**
MATH 329. Introduction to Probability and Theoretical Statistics **Credits: 3.00** ²

Major Requirements Total: 29-33 Credit Hours

Footnotes

¹ MATH 238 may be substituted for MATH 300 and MATH 336 if the student is completing a double major, seeking the computational sciences concentration, or received credit for MATH 238 before declaring a math major.

² MATH 229 and MATH 329 is recommended. For students choosing MATH 318, a course with statistical data analysis (MATH 321, MATH 322, MATH 324, MATH 327 or MATH 354) is recommended.

Additional Requirements for Students Seeking Secondary Teaching Licensure

Students seeking secondary teaching licensure earn the Bachelor of Arts or Bachelor of Sciences degree and then complete the Master of Arts in Teaching degree.

It is necessary to be admitted to the teacher education program prior to enrolling in pre-professional education courses. For a full description of the program in secondary education, refer to the College of Education, Department of Middle, Secondary and Mathematics Education.

Students seeking secondary teaching licensure must (in addition to the required core courses):

Complete the 22-24 credit hours that comprise the pre-professional education program in secondary education.

Complete 12 credit hours of mathematics courses:

MATH 310. Elementary Number Theory **Credits: 3.00**

or

MATH 315. Real Number System **Credits: 3.00**

MATH 415. History of Mathematics **Credits: 3.00**

MATH 470. Connections in Mathematics **Credits: 3.00**

MATH 475. Fund Concepts of Geometry **Credits: 3.00**

Additional Requirements for Students Not Seeking Secondary Teaching Licensure

Students not seeking secondary teaching licensure track must complete (in addition to the required core courses) one of the following options, each consisting of 12 credit hours of mathematics courses.

The option chosen and the courses chosen to satisfy an option by a student are made in consultation with the student's adviser and are dependent upon the student's interests and career objectives. Students interested in pursuing graduate studies in mathematics are strongly urged to complete both MATH 411 and MATH 431.

Option One:

Mathematics electives MATH 310 or above **Credits: 9.00** (No more than six of the nine hours may be MATH 486 and/or MATH 497)

One of the following courses: 3 Credit Hours

MATH 411. Advanced Calculus II **Credits: 3.00**

MATH 431. Abstract Algebra II **Credits: 3.00**

MATH 434. Advanced Linear Algebra **Credits: 3.00**

MATH 435. Introduction to Topology **Credits: 3.00**

Option One Total: 12 Credit Hours

Option Two:

Mathematics electives MATH 310 or above **Credits: 6.00**

One of the pairs of courses below: 6 Credit Hours

MATH 426. Probability and Mathematical Statistics I **Credits: 3.00 and**

MATH 427. Probability and Mathematical Statistics II **Credits: 3.00**

MATH 440. Fourier Analysis and Partial Differential Equations **Credits: 3.00 and**

MATH 441. Analysis and Dynamics of Differential Equations **Credits: 3.00**

MATH 448. Numerical Analysis **Credits: 3.00 and**

MATH 449. Numerical Analysis for Differential Equations **Credits: 3.00**

Option Two Total: 12 Credit Hours

Recommended Schedule for Majors Seeking Secondary Licensure

First Year

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**

MATH 235. Calculus I [C3QR] **Credits: 4.00**

MATH 236. Calculus II **Credits: 4.00**

MATH 245. Discrete Mathematics **Credits: 3.00**

Madison Foundations (formerly Cluster One: Skills for the 21st Century) **Credits: 9.00-12.00**

General Education courses **Credits: 3.00-6.00**

First Year Total: 30 Credit Hours

Second Year

MATH 237. Calculus III **Credits: 4.00**

MATH 248. Computers and Numerical Algorithms **Credits: 4.00**

MATH 300. Linear Algebra **Credits: 3.00**

MATH 329. Introduction to Probability and Theoretical Statistics **Credits: 3.00**

MATH 336. Elementary Differential Equations **Credits: 3.00**

Pre-professional education requirements **Credits: 6.00**

General Education **Credits: 7.00**

Second Year Total: 30 Credit Hours

Third Year

MATH 430. Abstract Algebra I **Credits: 3.00**

Pre-professional education requirements and General Education courses/electives **Credits: 21.00**

Choose two of the following: 6 Credit Hours

MATH 310. Elementary Number Theory **Credits: 3.00**

MATH 315. Real Number System **Credits: 3.00**

MATH 410. Advanced Calculus I **Credits: 3.00**

MATH 415. History of Mathematics **Credits: 3.00**

MATH 475. Fund Concepts of Geometry **Credits: 3.00**

Mathematics electives numbered MATH 310 or above

Third Year Total: 30 Credit Hours

Fourth Year

Pre-professional education requirements and General Education courses/electives **Credits: 21.00**

Choose three from the following: 9 Credit Hours

MATH 310. Elementary Number Theory **Credits: 3.00**

MATH 315. Real Number System **Credits: 3.00**

MATH 410. Advanced Calculus I **Credits: 3.00**

MATH 415. History of Mathematics **Credits: 3.00**

MATH 470. Connections in Mathematics **Credits: 3.00**

MATH 475. Fund Concepts of Geometry **Credits: 3.00**

Mathematics electives numbered MATH 310 or above

Fourth Year Total: 30 Credit Hours

Recommended Schedule for Mathematics Majors Not Seeking Secondary Licensure

First Year

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**

MATH 235. Calculus I [C3QR] **Credits: 4.00**

MATH 236. Calculus II **Credits: 4.00**

Discrete Mathematics **Credits: 3.00**

General Education courses **Credits: 4.00-7.00**

First Year Total: 30 Credit Hours

Second Year

MATH 237. Calculus III **Credits: 4.00**

MATH 248. Computers and Numerical Algorithms **Credits: 4.00**

MATH 300. Linear Algebra **Credits: 3.00**

MATH 329. Introduction to Probability and Theoretical Statistics **Credits: 3.00**

MATH 336. Elementary Differential Equations **Credits: 3.00**

General Education courses/electives **Credits: 13.00**

Second Year Total: 30 Credit Hours

Third Year

General Education courses/electives **Credits: 18.00-21.00**

Mathematics required or elective courses numbered MATH 310 or above **Credits: 6.00-9.00**

Choose one of the following: 3 Credit Hours

MATH 410. Advanced Calculus I **Credits: 3.00**
MATH 430. Abstract Algebra I **Credits: 3.00**

Third Year Total: 30 Credit Hours

Fourth Year

Mathematics required or elective courses MATH 310 or above *Credits: 6.00-9.00*
Electives *Credits: 18.00-21.00*

Choose one of the following: 3 Credit Hours

MATH 410. Advanced Calculus I **Credits: 3.00**
MATH 430. Abstract Algebra I **Credits: 3.00**

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Mathematics, B.S.

Program Description

The mathematics major provides a program of study with core fundamentals along with electives that prepare students for a wide variety of careers, including jobs in industry, careers in teaching and further study in graduate school. The core courses provide a solid foundation of critical thinking and mathematical concepts, while the various elective courses provide a breadth of knowledge in relevant topics. Our diverse faculty have research interests in a number of mathematical disciplines, and provide undergraduate research opportunities in those disciplines beyond the course requirements for the major.

Credit by Examination

The Department of Mathematics offers credit by examination for some of the courses taught in the department. Students who want to take an examination must apply to the department head. Upon application students will receive details regarding approval to take the examination.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ^{1,2}	41
Scientific Literacy requirement (in addition to General Education)	3-4
University electives	32-35
Major requirements (listed below)	41-45

Degree Requirements	Credit Hours
Total	120

Footnotes

¹ MATH 231 or MATH 235 must be included and students seeking secondary teaching licensure must include PSYC 160.
² The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

Major Requirements

Mathematics requirements depend on whether or not the student is seeking secondary teaching licensure. All students must complete 29-33 credit hours of the following required core mathematics courses and 12 credit hours of mathematics courses beyond the core.

Core Courses Required of All Majors

- MATH 236. Calculus II **Credits: 4.00**
- MATH 237. Calculus III **Credits: 4.00**
- MATH 245. Discrete Mathematics **Credits: 3.00**
- MATH 248. Computers and Numerical Algorithms **Credits: 4.00**
- MATH 300. Linear Algebra **Credits: 3.00 and**
- MATH 336. Elementary Differential Equations **Credits: 3.00** ¹
- MATH 410. Advanced Calculus I **Credits: 3.00**
- MATH 430. Abstract Algebra I **Credits: 3.00**

Choose one of the following:

- MATH 318. Introduction to Probability and Statistics **Credits: 4.00**
- or
- MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00 and**
- MATH 329. Introduction to Probability and Theoretical Statistics **Credits: 3.00** ²

Major Requirements Total: 29-33 Credit Hours

Footnotes

¹ MATH 238 may be substituted for MATH 300 and MATH 336 if the student is completing a double major, seeking the computational sciences concentration, or received credit for MATH 238 before declaring a math major.
² MATH 229 and MATH 329 is recommended. For students choosing MATH 318, a course with statistical data analysis (MATH 321, MATH 322, MATH 324, MATH 327 or MATH 354) is recommended.

Additional Requirements for Students Seeking Secondary Teaching Licensure

Students seeking secondary teaching licensure earn the Bachelor of Arts or Bachelor of Sciences degree and then complete the Master of Arts in Teaching degree.

It is necessary to be admitted to the teacher education program prior to enrolling in pre-professional education courses. For a full description of the program in secondary education, refer to the College of Education, Department of Middle, Secondary and Mathematics Education.

Students seeking secondary teaching licensure must (in addition to the required core courses):

Complete the 22-24 credit hours that comprise the pre-professional education program in secondary education.

Complete 12 credit hours of mathematics courses:

MATH 310. Elementary Number Theory **Credits: 3.00**

or

MATH 315. Real Number System **Credits: 3.00**

MATH 415. History of Mathematics **Credits: 3.00**

MATH 470. Connections in Mathematics **Credits: 3.00**

MATH 475. Fund Concepts of Geometry **Credits: 3.00**

Additional Requirements for Students Not Seeking Secondary Teaching Licensure

Students not seeking secondary teaching licensure track must complete (in addition to the required core courses) one of the following options, each consisting of 12 credit hours of mathematics courses.

The option chosen and the courses chosen to satisfy an option by a student are made in consultation with the student's adviser and are dependent upon the student's interests and career objectives. Students interested in pursuing graduate studies in mathematics are strongly urged to complete both MATH 411 and MATH 431.

Option One:

Mathematics electives MATH 310 or above **Credits: 9.00** (*No more than six of the nine hours may be MATH 486 and/or MATH 497*)

One of the following courses: 3 Credit Hours

MATH 411. Advanced Calculus II **Credits: 3.00**

MATH 431. Abstract Algebra II **Credits: 3.00**

MATH 434. Advanced Linear Algebra **Credits: 3.00**

MATH 435. Introduction to Topology **Credits: 3.00**

Option One Total: 12 Credit Hours

Option Two:

Mathematics electives MATH 310 or above **Credits: 6.00**

One of the pairs of courses below: 6 Credit Hours

MATH 426. Probability and Mathematical Statistics I **Credits: 3.00 and**

MATH 427. Probability and Mathematical Statistics II **Credits: 3.00**

MATH 440. Fourier Analysis and Partial Differential Equations **Credits: 3.00 and**

MATH 441. Analysis and Dynamics of Differential Equations **Credits: 3.00**

MATH 448. Numerical Analysis **Credits: 3.00 and**

MATH 449. Numerical Analysis for Differential Equations **Credits: 3.00**

Option Two Total: 12 Credit Hours

Recommended Schedule for Majors Seeking Secondary Licensure

First Year

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**

MATH 235. Calculus I [C3QR] **Credits: 4.00**

MATH 236. Calculus II **Credits: 4.00**

MATH 245. Discrete Mathematics **Credits: 3.00**

Madison Foundations (formerly Cluster One: Skills for the 21st Century) **Credits: 9.00-12.00**

General Education courses **Credits: 3.00-6.00**

First Year Total: 30 Credit Hours

Second Year

MATH 237. Calculus III **Credits: 4.00**

MATH 248. Computers and Numerical Algorithms **Credits: 4.00**

MATH 300. Linear Algebra **Credits: 3.00**

MATH 329. Introduction to Probability and Theoretical Statistics **Credits: 3.00**

MATH 336. Elementary Differential Equations **Credits: 3.00**

Pre-professional education requirements **Credits: 6.00**

General Education **Credits: 7.00**

Second Year Total: 30 Credit Hours

Third Year

MATH 430. Abstract Algebra I **Credits: 3.00**

Pre-professional education requirements and General Education courses/electives **Credits: 21.00**

Choose two of the following: 6 Credit Hours

MATH 310. Elementary Number Theory **Credits: 3.00**

MATH 315. Real Number System **Credits: 3.00**

MATH 410. Advanced Calculus I **Credits: 3.00**

MATH 415. History of Mathematics **Credits: 3.00**

MATH 475. Fund Concepts of Geometry **Credits: 3.00**

Mathematics electives numbered MATH 310 or above

Third Year Total: 30 Credit Hours

Fourth Year

Pre-professional education requirements and General Education courses/electives **Credits: 21.00**

Choose three from the following: 9 Credit Hours

MATH 310. Elementary Number Theory **Credits: 3.00**
MATH 315. Real Number System **Credits: 3.00**
MATH 410. Advanced Calculus I **Credits: 3.00**
MATH 415. History of Mathematics **Credits: 3.00**
MATH 470. Connections in Mathematics **Credits: 3.00**
MATH 475. Fund Concepts of Geometry **Credits: 3.00**
Mathematics electives numbered MATH 310 or above

Fourth Year Total: 30 Credit Hours

Recommended Schedule for Mathematics
Majors Not Seeking Secondary Licensure

First Year

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**
MATH 235. Calculus I [C3QR] **Credits: 4.00**
MATH 236. Calculus II **Credits: 4.00**
Discrete Mathematics **Credits: 3.00**
General Education courses **Credits: 4.00-7.00**

First Year Total: 30 Credit Hours

Second Year

MATH 237. Calculus III **Credits: 4.00**
MATH 248. Computers and Numerical Algorithms **Credits: 4.00**
MATH 300. Linear Algebra **Credits: 3.00**
MATH 329. Introduction to Probability and Theoretical Statistics **Credits: 3.00**
MATH 336. Elementary Differential Equations **Credits: 3.00**
General Education courses/electives **Credits: 13.00**

Second Year Total: 30 Credit Hours

Third Year

General Education courses/electives **Credits: 18.00-21.00**
Mathematics required or elective courses numbered MATH 310 or above **Credits: 6.00-9.00**

Choose one of the following: 3 Credit Hours

MATH 410. Advanced Calculus I **Credits: 3.00**
MATH 430. Abstract Algebra I **Credits: 3.00**

Third Year Total: 30 Credit Hours

Fourth Year

Mathematics required or elective courses MATH 310 or above **Credits: 6.00-9.00**
Electives **Credits: 18.00-21.00**

Choose one of the following: 3 Credit Hours

MATH 410. Advanced Calculus I **Credits: 3.00**
MATH 430. Abstract Algebra I **Credits: 3.00**

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Statistics, B.S.

Program Description

The Department of Mathematics and Statistics offers a major in statistics to meet the needs of both the public and the private sectors for graduates with degrees in statistics. Students may choose either a standard statistics major or a statistics major with a data science concentration. The required courses provide a balance of applications and theory, which allows students to prepare for immediate employment or graduate studies by proper selection of the program electives.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ^{1, 2}	41
Quantitative requirement ²	3
Scientific Literacy requirement (in addition to General Education)	3-4
Major requirements (listed below)	44-46
University electives	29-32
Total	120

Footnotes

¹ MATH 231 or MATH 235 must be included.

² The General Education program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within the major. The quantitative requirement is also met by courses within the major and not included in the 120 credit hour total.

Major Requirements

Core Requirements for Statistics Majors: 22 Credit Hours

Students must complete 22 core credit hours and 22-24 additional credit hours for the B.S. in Statistics. Students interested in pursuing graduate studies in statistics are strongly encouraged to double-major in statistics and mathematics.

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00** ¹

MATH 236. Calculus II **Credits: 4.00**
 MATH 322. Applied Linear Regression **Credits: 3.00**
 MATH 327. Categorical Data Analysis **Credits: 3.00**
 MATH 329. Introduction to Probability and Theoretical Statistics **Credits: 3.00**
 MATH 421. Applied Multivariate Statistical Analysis **Credits: 3.00**
 MATH 426. Probability and Mathematical Statistics I **Credits: 3.00**

Footnotes

¹ MATH 220 with a minimum grade of B- may be substituted for MATH 229 if the student received credit for MATH 220 before declaring a statistics major.

Statistics Major with no concentration: 22-24 Credit Hours

Additional Required Courses: 16-18 Credit Hours

MATH 237. Calculus III **Credits: 4.00**
 MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**
 MATH 428. Statistical Consulting **Credits: 3.00**

Choose one of the following: 3-4 Credit Hours

MATH 248. Computers and Numerical Algorithms **Credits: 4.00**
 MATH 309. SAS Programming and Data Management **Credits: 3.00**

Choose one of the following: 3-4 Credit Hours

MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**
 MATH 300. Linear Algebra **Credits: 3.00**

Electives: 6 Credit Hours

MATH 268. Data Analysis and Visualization **Credits: 3.00**
 MATH 324. Applied Nonparametric Statistics **Credits: 3.00**
 MATH 325. Survey Sampling Methods **Credits: 3.00**
 MATH 326. Statistical Quality Control **Credits: 3.00**
 MATH 328. Time Series Analysis **Credits: 3.00**
 MATH 354. Introduction to Biometrics **Credits: 4.00**
 MATH 358. Introduction to Machine Learning **Credits: 3.00**
 MATH 368. Statistical Computing **Credits: 3.00**
 MATH 410. Advanced Calculus I **Credits: 3.00**
 MATH 411. Advanced Calculus II **Credits: 3.00** ¹
 MATH 423. Stochastic Process **Credits: 3.00**
 MATH 424. Statistical Decision Theory **Credits: 3.00**
 MATH 427. Probability and Mathematical Statistics II **Credits: 3.00**
 MATH 429. Research Project in Statistics **Credits: 1.00 - 3.00**

Total: 44-46 Credit Hours

Data Science Concentration

Statistics Major with Data Science Concentration: 24 Credit Hours

Additional Required Courses: 18 Credit Hours

DATA 200. Introduction to Data **Credits: 3.00**
 MATH 250. Programming for Data Science **Credits: 3.00**
 MATH 251. Database Queries **Credits: 3.00**
 MATH 268. Data Analysis and Visualization **Credits: 3.00**
 MATH 300. Linear Algebra **Credits: 3.00**
 MATH 358. Introduction to Machine Learning **Credits: 3.00**

Electives: 6 Credit Hours

MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**
 MATH 324. Applied Nonparametric Statistics **Credits: 3.00**
 MATH 325. Survey Sampling Methods **Credits: 3.00**
 MATH 326. Statistical Quality Control **Credits: 3.00**
 MATH 328. Time Series Analysis **Credits: 3.00**
 MATH 340. Operations Research I **Credits: 3.00**
 MATH 354. Introduction to Biometrics **Credits: 4.00**
 MATH 368. Statistical Computing **Credits: 3.00**
 MATH 410. Advanced Calculus I **Credits: 3.00**
 MATH 411. Advanced Calculus II **Credits: 3.00** ¹
 MATH 423. Stochastic Process **Credits: 3.00**
 MATH 424. Statistical Decision Theory **Credits: 3.00**
 MATH 427. Probability and Mathematical Statistics II **Credits: 3.00**
 MATH 429. Research Project in Statistics **Credits: 1.00 - 3.00**
 MATH 434. Advanced Linear Algebra **Credits: 3.00**

Total: 46 Credit Hours

Footnote

¹ MATH 411 is recommended for students planning to do graduate work in statistics.

Recommended Schedule for Majors

First Year

Madison Foundations (formerly Cluster One: Skills for the 21st Century) **Credits: 9.00**
 MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**
 MATH 236. Calculus II **Credits: 4.00**
 MATH 309. SAS Programming and Data Management **Credits: 3.00** ¹
 General Education courses **Credits: 11.00**

First Year Total: 30 Credit Hours

Second Year

MATH 237. Calculus III **Credits: 4.00**

MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**
MATH 322. Applied Linear Regression **Credits: 3.00**
MATH 329. Introduction to Probability and Theoretical Statistics **Credits: 3.00**
General Education courses/electives **Credits: 17.00**

Second Year Total: 30 Credit Hours

Third Year

MATH 300. Linear Algebra **Credits: 3.00**²
MATH 327. Categorical Data Analysis **Credits: 3.00**
General Education courses/electives **Credits: 24.00**

Third Year Total: 30 Credit Hours

Fourth Year

MATH 421. Applied Multivariate Statistical Analysis **Credits: 3.00**
MATH 426. Probability and Mathematical Statistics I **Credits: 3.00**
MATH 428. Statistical Consulting **Credits: 3.00**
Electives **Credits: 21.00**

Total: 30 Credit Hours

Footnotes

¹ MATH 248. Computers and Numerical Algorithms may be substituted.

² MATH 238. Linear Algebra with Differential Equations may be substituted.

Program Total: 120 Credit Hours

Computational Analytics Minor

Debra Warne, **Coordinator**
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Email: warneda@jmu.edu

Computational analytics utilizes numerical techniques, programming, and tools from applied mathematics to analyze and search for optimal solutions to real-world problems. In the modern world, the demand for computational skills and analytical abilities far surpasses the supply. The minor in computational analytics is designed for students who want to gain such expertise. This minor prepares students to solve complex problems using sound mathematical reasoning, quantitative skills, and hands-on experience in computer programming. The minor also provides an opportunity to engage with fields currently in great demand such as operations research, mathematics of machine learning, artificial intelligence, and data analytics.

The minor in computational analytics is open to any major. Only credits from MATH 231-MATH 232, MATH 235 and MATH 236 may be used to double-count with the minor in mathematics. A student wishing to obtain both minors must fulfill a separate set of courses other than those used for the computational analytics minor for the additional 10 credits needed for the

mathematics minor. The computational analytics minor is available to students majoring in mathematics or statistics but courses taken for the computational analytics minor cannot double count with courses beyond the core for the mathematics or statistics major. For example, a mathematics major cannot double count courses taken to fulfill the additional 12 credit hours for the math major (beyond the core) with courses taken to satisfy the six elective credits in the computational analytics minor. A statistics major may double count the required courses in the computational analytics minor toward the statistics major.

Required Courses: 8 Credit Hours

MATH 236. Calculus II **Credits: 4.00**
MATH 248. Computers and Numerical Algorithms **Credits: 4.00**

Choose one of the following: 4-6 Credit Hours

MATH 235. Calculus I [C3QR] **Credits: 4.00**
or
MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00 and**
MATH 232. Calculus with Functions II **Credits: 3.00**

Restricted Electives: 6 Credit Hours

Choose two of the following courses:

MATH 340. Operations Research I **Credits: 3.00**
MATH 440. Fourier Analysis and Partial Differential Equations **Credits: 3.00**¹
MATH 448. Numerical Analysis **Credits: 3.00**
MATH 449. Numerical Analysis for Differential Equations **Credits: 3.00**¹

Total: 18-20 Credit Hours

Footnote

¹ These courses may require prerequisites that are not required in the minor.

Data Analytics Minor

The minor in data analytics is designed for students majoring in a STEM field who want to gain additional technical competencies in statistical data analytic methods as it relates to their field of study. This minor will provide students with analytical and technical skills in the ethical use of data in research environments; application of statistical and probabilistic thinking to data analysis; data visualization and data management; and application of machine learning techniques to their own field of study. Although the minor is primarily intended for students majoring in one of the degree programs offered by the College of Science and Mathematics, any student that meets program requirements may take the minor.

The minor in data analytics is a minimum 18-hour credit program, and no more than six credits from the minor may be used to double-count with a major or another minor.

Required Courses: 12 Credit Hours

DATA 200. Introduction to Data **Credits: 3.00**
MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**
MATH 268. Data Analysis and Visualization **Credits: 3.00**

DATA 358. Introduction to Machine Learning **Credits: 3.00**
or
MATH 358. Introduction to Machine Learning **Credits: 3.00**

Choose at least six credit hours from one or more
of the following foci: 6 Credit Hours

Mathematics/Statistics focus

MATH 248. Computers and Numerical Algorithms **Credits: 4.00**
MATH 300. Linear Algebra **Credits: 3.00**
MATH 309. SAS Programming and Data Management **Credits: 3.00**
MATH 322. Applied Linear Regression **Credits: 3.00**
MATH 327. Categorical Data Analysis **Credits: 3.00**
MATH 328. Time Series Analysis **Credits: 3.00**
MATH 368. Statistical Computing **Credits: 3.00**
MATH 421. Applied Multivariate Statistical Analysis **Credits: 3.00**
MATH 426. Probability and Mathematical Statistics I **Credits: 3.00**

Biological Sciences focus

BIO 204. Viral Genome and Bioinformatics **Credits: 2.00**

BIO 342. Mathematical Models in Biology **Credits: 3.00**
or
MATH 342. Mathematical Models in Biology **Credits: 3.00**

BIO 346. Laboratory in Bacterial Pathogenomics **Credits: 2.00**

BIO 454. Introduction to Biometrics **Credits: 4.00**
or
MATH 354. Introduction to Biometrics **Credits: 4.00**

BIO 457. Biological Applications of Geographic Information Systems **Credits: 4.00**
BIO 481. Genomics **Credits: 4.00**
BIO 483. Bioinformatics **Credits: 4.00**

Earth Sciences focus

GEOL 360. GIS for the Geoscientist **Credits: 3.00**
GEOL 390. Laboratory Techniques in Geology (2, 2) **Credits: 3.00**
GEOL 406. Paleoclimatology and Paleoceanography **Credits: 3.00**
GEOL 410. Engineering Geology (2, 2) **Credits: 3.00**
GEOL 440. Geophysics (3, 2) **Credits: 4.00**
GEOL 489. Quantitative Methods in Geology **Credits: 3.00**

Physical Sciences focus

PHYS 339. Introductory Nuclear Science **Credits: 4.00**
PHYS 344. Advanced Physics Laboratory I **Credits: 1.00**
PHYS 345. Advanced Physics Laboratory II **Credits: 1.00**
PHYS 346. Advanced Physics Laboratory III **Credits: 1.00**
PHYS 386. Robots: Structure and Theory **Credits: 3.00**
PHYS 390. Computer Applications in Physics **Credits: 3.00**
CHEM 351. Analytical Chemistry **Credits: 4.00**

CHEM 352. Instrumental Analysis **Credits: 3.00** and
CHEM 352L. Instrumental Analysis Laboratory **Credits: 2.00**

Total: 18 Credit Hours

Mathematics for Middle Grades Teachers Minor

The Mathematics for Middle Grades Teachers Minor is open to students not majoring in mathematics or statistics. Each student must obtain prior approval of all courses to be counted in the minor from the adviser, Alexis Stevens, or from the department head.

The minor requires a minimum of 25 credit hours. At least six hours must be earned within the JMU **Department of Mathematics and Statistics**.

The **Department of Mathematics and Statistics** offers credit by examination for some of the courses taught in the department. Students who want to take an examination must apply to the department head. Upon application students will receive details regarding approval to take the examination.

Required Courses

MATH 110. Mathematics for Elementary and Middle School Teachers I [C3QR] **Credits: 4.00**
MATH 111. Mathematics Seminar for Elementary and Middle School Teachers **Credits: 1.00**
MATH 210. Mathematics for Elementary and Middle School Teachers II **Credits: 4.00**
MATH 304. Principles of Algebra **Credits: 3.00**
MATH 305. Principles of Geometry **Credits: 3.00**
MATH 306. Principles of Analysis **Credits: 3.00**
MATH 307. Principles of Probability and Statistics **Credits: 3.00**
MATH 135. Elementary Functions **Credits: 4.00**¹

Total: 25 Credit Hours

Footnote

¹With department approval, a substitute may be counted in place of MATH 135.

Mathematics Minor

The mathematics minor is open to students not majoring in mathematics or statistics. Each student must obtain prior approval of all courses to be counted in the minor from the adviser, Peter D. Kohn, or from the department head.

A minor in mathematics requires a minimum of 18 credit hours. At least six hours must be earned within the JMU Department of Mathematics and Statistics.

Credit by Examination

The Department of Mathematics and Statistics offers credit by examination for some of the courses taught in the department. Students who want to take an examination must apply to the department head. Upon application students will receive details regarding approval to take the examination.

Core Courses

MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**
and

MATH 232. Calculus with Functions II **Credits: 3.00**
and

MATH 236. Calculus II **Credits: 4.00**

or

MATH 235. Calculus I [C3QR] **Credits: 4.00** and

MATH 236. Calculus II **Credits: 4.00**

Mathematics courses numbered MATH 237 or above, excluding mathematics courses numbered 301-309 *10 Credit Hours*

Total: 18-20 Credit Hours

Statistics Minor

Prabhashi Withana Gamage, **Coordinator**

Phone: (540) 568-1736

Email: withanpw@jmu.edu

A minor in statistics requires a minimum of 18 credit hours. Students seeking the minor in statistics must complete one of the following options.

Credit by Examination

The Department of Mathematics and Statistics offers credit by examination for some of the courses taught in the department. Students who want to take an examination must apply to the department head. Upon application students will receive details regarding approval to take the examination.

Option 1

Not open to students majoring in mathematics. Students completing Option 1 must obtain prior approval of the courses to be counted in the minor from the statistics minor adviser, Nusrat Jahan.

Required Courses

MATH 322. Applied Linear Regression **Credits: 3.00**

Choose one of the following: 3-4 Credit Hours

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**

MATH 318. Introduction to Probability and Statistics **Credits: 4.00**

MATH 329. Introduction to Probability and Theoretical Statistics **Credits: 3.00**

Choose four of the following: 12 Credit Hours

MATH 268. Data Analysis and Visualization **Credits: 3.00**

MATH 309. SAS Programming and Data Management **Credits: 3.00**

MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**

MATH 324. Applied Nonparametric Statistics **Credits: 3.00**

MATH 325. Survey Sampling Methods **Credits: 3.00**

MATH 326. Statistical Quality Control **Credits: 3.00**

MATH 327. Categorical Data Analysis **Credits: 3.00**

MATH 328. Time Series Analysis **Credits: 3.00**

MATH 358. Introduction to Machine Learning **Credits: 3.00**

MATH 368. Statistical Computing **Credits: 3.00**

MATH 421. Applied Multivariate Statistical Analysis **Credits: 3.00**

MATH 423. Stochastic Process **Credits: 3.00**

MATH 424. Statistical Decision Theory **Credits: 3.00**

MATH 426. Probability and Mathematical Statistics I **Credits: 3.00**

MATH 427. Probability and Mathematical Statistics II **Credits: 3.00**

BIO 454. Introduction to Biometrics **Credits: 4.00**

Total: 18-19 Credit Hours

Option 2

Not open to students majoring in mathematics. Students completing Option 2 must obtain prior approval of the courses to be counted in the minor from the statistics minor adviser, Nusrat Jahan.

Required Courses

MATH 236. Calculus II **Credits: 4.00**

MATH 237. Calculus III **Credits: 4.00**

MATH 322. Applied Linear Regression **Credits: 3.00**

Choose one of the following:

MATH 318. Introduction to Probability and Statistics **Credits: 4.00**

MATH 329. Introduction to Probability and Theoretical Statistics **Credits: 3.00**

Choose two of the following: 6 Credit Hours

MATH 268. Data Analysis and Visualization **Credits: 3.00**

MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**

MATH 326. Statistical Quality Control **Credits: 3.00**

MATH 358. Introduction to Machine Learning **Credits: 3.00**

MATH 368. Statistical Computing **Credits: 3.00**

MATH 423. Stochastic Process **Credits: 3.00**

Total: 20-21 Credit Hours

Option 3

The Option 3 minor in statistics is only open to students majoring in mathematics. Up to six hours may be double-counted towards the mathematics major. Students completing Option 3 must obtain prior approval of the courses to be counted in the minor from the statistics minor adviser, Nusrat Jahan.

Required Courses

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**¹

MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**

MATH 322. Applied Linear Regression **Credits: 3.00**

MATH 329. Introduction to Probability and Theoretical Statistics **Credits: 3.00**¹

Electives: 6-10 Credit Hours

MATH 268. Data Analysis and Visualization **Credits: 3.00**

MATH 324. Applied Nonparametric Statistics **Credits: 3.00**

MATH 325. Survey Sampling Methods **Credits: 3.00**

MATH 327. Categorical Data Analysis **Credits: 3.00**

MATH 328. Time Series Analysis **Credits: 3.00**

MATH 354. Introduction to Biometrics **Credits: 4.00**

MATH 358. Introduction to Machine Learning **Credits: 3.00**

MATH 368. Statistical Computing **Credits: 3.00**

MATH 421. Applied Multivariate Statistical Analysis **Credits: 3.00**

MATH 426. Probability and Mathematical Statistics I **Credits: 3.00**

¹

Total: 18-20 Credit Hours

Footnote

¹ MATH 318 may be substituted for MATH 229 and MATH 329 by students taking at least 9 hours of elective courses.

School of Media Arts and Design

Joe Hinshaw, **Interim Director**

Phone: (540) 568-7007

Email: smad@jmu.edu

Location: Harrison Hall, Room 0283

Website: <http://www.jmu.edu/smad>

Professors

D. Flamiano, R. Greene, J. Hinshaw, D. Maune, G. Mellinger, K. Reynolds, R. Soenksen, S. Wright

Associate Professors

N. Dinc, C. Guo, S. Hokanson, A. Hooker, T. Mitchell, I. O'Reilly, A. Vilela, D. Wang, N. Zheng

Assistant Professors

R. Alessi, E. Hernandez, E. Kvernen, R. Parkhurst, M. Smalls

Instructor

J. Loyacano

Mission Statement

The School of Media Arts and Design prepares students to serve as creative, reflective and highly skilled media producers and storytellers, sensitive to the personal and social impact of the messages they create and to the important role media can play in advancing the public interest.

Vision

To be a national leader in media education, providing innovative programs that embrace and integrate traditional media concepts, values and skills with new and evolving technologies.

We value:

Inquiry-based learning, both independent and collaborative, that emphasizes the creative process and is distinctly innovative, challenging, cooperative and collegial.

Historical, legal and ethical literacy and critical thinking skills that enable students to reach thoughtful and principled decisions throughout their careers.

Diverse communities and global perspectives acquired through study and experience.

Strong co-curricular, extracurricular and internship activities that enrich education and enhance an understanding of the role of media in society.

Goals

Graduating SMAD students will:

communicate a message via a well-researched, targeted story appropriate for the audience and medium.

analyze different media messages and apply information literacy skills to assess their accuracy, relevance and context.

compose written products characteristic of entry-level media arts and design professionals.

apply ethical decision-making to the media production process.

integrate prior learning in order to analyze, plan, create, evaluate and revise a capstone-level creative product, while exhibiting professional collaboration skills.

produce and disseminate media while exercising current legal rights and responsibilities.

Diversity Statement

As faculty and staff in James Madison University's School of Media Arts and Design, we acknowledge the impact we and our students have on representation and narrative, as well as the role media can play in advancing public interest. The power of media and our responsibility as producers and storytellers are at the forefront of our experiential learning and critical analysis.

We are dedicated to diversity and inclusivity, and we encourage activities that

enrich our shared experience. We are here to uplift underrepresented communities in our academic pursuits, and we strive to build a community free of prejudice, intimidation and discrimination through our learning and teaching, scholarship and service.

Career Opportunities

The school integrates the fields and study of mass communication with an emphasis on effective visual storytelling across four areas of concentration: creative advertising, digital video and cinema, interactive design, and journalism. It offers a program of study that prepares students for careers that incorporate mass media related areas of expertise and for graduate study in mass communication and related areas.

Co-curricular Activities

Majors and interested non-majors are encouraged to participate in co-curricular activities and organizations associated with the school. Co-curricular activities entail practical media arts and design experiences for which credit is available through practica or other applied courses; however, students may participate in most co-curricular opportunities without receiving course credit.

The Breeze is the student newspaper.

BreezeTV is the student broadcasting activity.

Curio is one of several student-produced magazines in SMAD.

WMRA-FM is the campus public radio station.

WXJM-FM is the student radio station.

Special Admission and Retention Requirements, Minimum Grades, and Concentration Changes

Information on admission to the School of Media Arts and Design, retention and minimum grade requirements, and concentration changes may be found on the individual program pages listed below.

Media Arts and Design Teaching Licensure

In addition to the general education and academic major requirements, media arts and design majors desiring to add an endorsement in journalism to a secondary teacher license in another content area must be admitted to teacher education, complete the pre-professional program in secondary education at the undergraduate level and complete the graduate level Master of Arts in Teaching degree.

It is critical that students seeking licensure consult regularly with both their education adviser and their major adviser to support their progression through the programs. For a full description of the program in secondary teaching, refer to the Department of Middle, Secondary and Mathematics Education.

Media Arts and Design major; B.A. degree option

Program Description

The School of Media Arts and Design incorporates the study of mass media and mediated visual and aural expression, focusing on creative advertising,

video and cinema production, interactive design, journalism, film studies, and creative writing. SMAD offers a program of study that prepares students for careers in the media and/or corporate environments that rely on mass media and related areas of expertise, or graduate study in mass communication and related areas.

Admission and Minimum Grades

Special Admission and Retention Requirements

Admission to the School of Media Arts and Design is limited and competitive. There are two pathways to full admission to the SMAD major.

Direct Admission

Entering first year and transfer students who are awarded a competitive scholarship by the university, the College of Arts and Letters, or by the School of Media Arts and Design will be fully and directly admitted to SMAD. Those scholarships include the Dingledine-Bluestone Scholarships; the Senator Harry S. Byrd Jr.—D. Lathan Mims Renewable Scholarship; and the Alison B. Parker Memorial Renewable Scholarship. Their concentration will be determined by the SMAD Director, in consultation with faculty. Such scholarship holders are exempt from the admission application requirement but must fulfill any conditions attached to their awards.

Admission by Application

Students interested in majoring in the programs offered by the school must apply for a limited number of spaces in the major. An admission committee in the school reviews applications and offers admission based on availability to the most qualified students. A student may apply no more than two times for admission to the school.

September Application Period

The September application process is only for transfer students matriculating to JMU in the current fall semester or the immediately preceding spring or summer semesters and have declared the SMAD major. These students must be officially admitted to JMU as transfer students and must have earned at least 30 hours of JMU approved post high school college credit. They must be degree-seeking students and must be enrolled in at least 12 hours at JMU during the fall semester. The application is due at 4 p.m. on the second Friday of the fall semester.

Annual Application Period

Currently enrolled JMU students (including transfer students matriculating in January or in previous semesters) may apply during the annual application period that occurs in the spring semester. Students applying to the major at JMU must be degree-seeking and have completed at least 12 hours or be enrolled in at least 12 hours at JMU. The application is due at 4 p.m. on the third Friday of the spring semester. The exact date will be posted on the SMAD website.

Process

Students interested in applying for admission to this major must "declare" SMAD as a major and apply to become a "fully admitted" major. Declaring a SMAD major does not guarantee the student will be fully admitted into the SMAD major. Students must declare SMAD as a major prior to being eligible to enroll in SMAD 101. A declared SMAD student may take SMAD 101, but the

student is restricted from SMAD courses beyond SMAD 101 until being fully admitted into the major.

A complete application to the major includes the following:

Completion of SMAD 101 or enrollment in SMAD 101. Students must earn a minimum grade of "C-" (minimum 70%) in SMAD 101 or they will have to retake the course. Students get only two attempts to earn a minimum of 70% in the course.

Completion of the SMAD Admission Test with sections on English grammar and usage, time writing samples and basic computer knowledge.

Submitting all required components on the "SMAD Admissions" Canvas course:

An application letter/personal essay expressing reasons for interest in your first-choice concentration. If you wish to be considered for a second-choice concentration, submit a separate letter specifically for that concentration. (A student will only be accepted into one concentration.)

Unofficial transcript(s). (Transfer students must include unofficial transcripts from previous institutions and JMU Transfer Credit Report.)

A SMAD Admissions Questionnaire on Canvas that asks about media creation and experience.

A SMAD Contract on Canvas.

Following review by the SMAD admission committee, students will be notified about their acceptance into the major. If accepted, students will be eligible to register for SMAD courses. Students not accepted into the major will be notified and may reapply the following January or a later January. Students may apply to the major no more than two times.

Change of Concentration

Students accepted into the major are assigned to a concentration. Students who wish to change concentrations after being accepted into the major may ask to do so only during the annual application period, which ends at 4 p.m. on the third Friday of the spring semester.

To request a different concentration, the student must submit on the "SMAD Admissions" Canvas course the following:

A letter explaining why the student is seeking that change. This letter should be addressed to the Admissions Committee and be no more than two pages in length.

A completed Concentration Change Application form, which the student can download from the "SMAD Admissions" Canvas course and fill out after consulting with their adviser and obtaining the adviser's signature. The student must scan in and submit the finished form to upload on the Canvas site.

The student's unofficial transcripts.

A student seeking a concentration change must request access to the "SMAD Admissions" Canvas course. Directions for doing so are posted on SMAD's website.

If the Admissions Committee approves the student's request, the application will be reviewed by the SMAD director, who will grant final permission to change concentrations. There are no guarantees that the change will be

granted, and students who change concentrations will not receive overrides or prerequisite waivers to expedite graduation.

Minimum Grades

If a student enrolled in SMAD 101 is accepted into the major and makes an "F" in the course, the student will be dropped from the major. In order to be eligible to reapply for the major, the student must re-take SMAD 101 and reapply. If a student enrolled in SMAD 101 is accepted into the major and makes a "D+," "D" or "D-" in the course, the student may continue to take classes in the major; however, the student must retake SMAD 101 the next semester and earn a minimum grade of "C-". Students are limited to taking SMAD 101 twice. Failure to achieve a minimum grade of "C-" after the second time will result in the student being dropped from the major, including being dropped from any SMAD courses for which the student is preregistered, and the student may not reapply for admission to the major.

To graduate with a major in media arts and design, a student must have a minimum grade point average of 2.0 ("C") in the major.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ^{2,3}	0-14
Philosophy course (in addition to General Education courses) ³	3
University electives	14-28
Major requirements (listed below) ⁴	48
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures' placement test.

³ The foreign language and philosophy requirements may be satisfied by courses in the breadth requirement for the major, except for PHIL 120 and PHIL 150.

⁴ A student must complete a minimum of 48 credits for the SMAD major (42 SMAD credits and 6 non-SMAD B.A. breadth credits). In addition to courses in the School of Media Arts and Design, students must complete at least 72 non-SMAD credits.

Major Requirements

Core Requirements: 21 Credit Hours

SMAD 101. Introduction to Media Arts and Design **Credits: 3.00**
SMAD 201. Foundations of Visual Communication Design **Credits: 3.00**
SMAD 202. Foundations of Audio-Visual Storytelling **Credits: 3.00**
SMAD 203. Foundations of User Experience Design **Credits: 3.00**
SMAD 204. Foundations of Media Storytelling and Research **Credits: 3.00**
SMAD 301. The Media Arts: Culture By Design **Credits: 3.00**¹
or
SMAD 301L. The Media Arts: Culture By Design **Credits: 3.00**¹
SMAD 400. Senior Assessment in Media Arts and Design **Credits: 0.00**
SMAD 450. Law of Media Arts and Design **Credits: 3.00**

Footnote

¹ Students may receive SMAD credit for either SMAD 301 or SMAD 301L, but not both.

Breadth Requirement: 6 Credit Hours

To be accomplished visual storytellers, students seeking a degree in media arts and design require extra breadth in either foreign language and philosophy or scientific and quantitative literacy. Students seeking a Bachelor of Arts degree in media arts and design must complete any foreign language class between course numbers 212 or 232-399. In addition, those students must complete any 100-300 level philosophy course or PHIL 466 or PHIL 468.

Notes: Classes that satisfy the breadth requirements for SMAD that qualify as satisfying the university's degree requirements will also fulfill the university degree requirements. (PHIL 120 and PHIL 150 do not fulfill the university's degree requirements for philosophy.) In no case may a student double-count a general education class toward the university B.A. or B.S. degree requirements.

Concentration (courses listed below): 21 Credit Hours

SMAD majors apply for and are assigned to one of four concentrations (creative advertising, digital video and cinema, interactive design, journalism), and must complete all requirements for that concentration. Students are restricted from taking classes in other concentrations unless there is room and permission is granted.

Major Requirements Total: 48 Credit Hours

Media Arts and Design Concentrations

Creative Advertising Concentration

This professionally-oriented concentration provides students with the knowledge and skills to create and manage advertising programs emphasizing new media. In addition to the theoretical concepts underlying advertising, students learn strategic creative writing, effective message design and media production. Students also learn strategic planning, implementation and evaluation of new media technologies, and research and analysis of current trends and applications. The program reviews ethical and legal issues involved in the creative advertising process and the use of new media. Students

planning careers in creative advertising should obtain a broad liberal arts education to better understand the characteristics that make the diversified communication process effective across various media and organizations.

SMAD Core Requirements **Credits: 21.00**

SMAD 242. Introduction to Advertising and New Media **Credits: 3.00**
SMAD 252. Copywriting for Advertising **Credits: 3.00**¹
SMAD 342. Elements of Creative Advertising **Credits: 3.00**
SMAD 443. Creative Advertising Campaigns **Credits: 3.00**

Choose one of the following Applied Skills courses: 3 Credit Hours

SMAD 210. News Reporting and Writing **Credits: 3.00**
SMAD 220. Copy Editing **Credits: 3.00**
SMAD 225. Photojournalism **Credits: 3.00**
SMAD 305. Special Topics in Media Production **Credits: 3.00**²
SMAD 307. Interactive Design Web I **Credits: 3.00**
SMAD 310. Advanced Reporting and Writing **Credits: 3.00**
SMAD 315. Digital Social Media Advertising **Credits: 3.00**
SMAD 327. User-Centered Research and Usability Evaluation **Credits: 3.00**
SMAD 332. Visual Communication Design **Credits: 3.00**
SMAD 442. Functions of Corporate Communication **Credits: 3.00**

Choose two of the following Critical Analysis courses: 6 Credit Hours

SMAD 360L. British Media and Society **Credits: 3.00**
SMAD 371. Narrative Media Studies **Credits: 3.00**
SMAD 372. Media History **Credits: 3.00**
SMAD 373. Media Analysis and Criticism **Credits: 3.00**
SMAD 380. Introduction to Film **Credits: 3.00**
SMAD 398. Critical Studies in Media Arts and Design **Credits: 3.00**²
SMAD 460. Film and Society **Credits: 3.00**
SMAD 461. Film as Art **Credits: 3.00**
SMAD 462. Documentary in Film and Television **Credits: 3.00**

SMAD 463. Film Adaptations **Credits: 3.00**
or

SMAD 463L. Film Adaptations **Credits: 3.00**

SMAD 464. Contemporary American Film **Credits: 3.00**
SMAD 465. The Entertainment Industry **Credits: 3.00**³
SMAD 470. New Media and Society **Credits: 3.00**
SMAD 471. Media Ethics **Credits: 3.00**

SMAD 472. Media and Politics **Credits: 3.00**⁴
or

SMAD 472L. Media and Politics **Credits: 3.00**⁴

SMAD 498. Senior Seminar in Media Arts and Design **Credits: 3.00**

Creative Advertising Concentration Total: 42 Credit Hours

Digital Video and Cinema Concentration

The core mission of the digital video and cinema concentration is to prepare students to be visual storytellers. Students will develop a broad understanding of the aesthetics, techniques and technologies that embody the visual storytelling process as well as a critical perspective of how media tools are used to create content, convey information and impact audiences.

The program offers preparation in writing, development, production and post-production in various genres, and an exploration of the continuously evolving commercial and artistic potential of visual media and story. Digital video and cinema students are encouraged to complement their concentration with a robust liberal arts experience that could include a minor and/or a second major. An internship is also recommended.

SMAD Core Requirements *Credits: 21.00*

SMAD 302. Video Production **Credits: 3.00**

Choose one of the following: 3 Credit Hours

SMAD 250. Scriptwriting **Credits: 3.00**

SMAD 251. Screenplay Writing **Credits: 3.00**

SMAD 253. The Shooting Script: The Process of Script to Screen **Credits: 3.00**⁵

Choose one of the following: 3 Credit Hours

SMAD 407. Business and Management of Digital Media **Credits: 3.00**

SMAD 410. The Creative Producer **Credits: 3.00**³

Choose two of the following Applied Skills courses: 6 Credit Hours

SMAD 303. Post Production **Credits: 3.00**

SMAD 304. Audio Production **Credits: 3.00**

SMAD 305. Special Topics in Media Production **Credits: 3.00**

SMAD 306. Studio Production **Credits: 3.00**

SMAD 340. Advanced Screenplay Writing **Credits: 3.00**

SMAD 402. Motion Graphic Design and Production **Credits: 3.00**

SMAD 403. Documentary Production **Credits: 3.00**

SMAD 405. Producing and Directing **Credits: 3.00**

SMAD 462. Documentary in Film and Television **Credits: 3.00**

SMAD 463. Film Adaptations **Credits: 3.00**

or

SMAD 463L. Film Adaptations **Credits: 3.00**

Choose two of the following Critical Analysis courses: 6 Credit Hours

SCOM 360L. British Media and Society **Credits: 3.00**

SMAD 371. Narrative Media Studies **Credits: 3.00**

SMAD 372. Media History **Credits: 3.00**

SMAD 373. Media Analysis and Criticism **Credits: 3.00**

SMAD 380. Introduction to Film **Credits: 3.00**

SMAD 398. Critical Studies in Media Arts and Design **Credits: 3.00**²

SMAD 460. Film and Society **Credits: 3.00**

SMAD 461. Film as Art **Credits: 3.00**

SMAD 462. Documentary in Film and Television **Credits: 3.00**

SMAD 463. Film Adaptations **Credits: 3.00**

or

SMAD 463L. Film Adaptations **Credits: 3.00**

SMAD 465. The Entertainment Industry **Credits: 3.00**³

SMAD 464. Contemporary American Film **Credits: 3.00**

SMAD 470. New Media and Society **Credits: 3.00**

SMAD 471. Media Ethics **Credits: 3.00**

SMAD 472. Media and Politics **Credits: 3.00**⁴

or

SMAD 472L. Media and Politics **Credits: 3.00**⁴

SMAD 498. Senior Seminar in Media Arts and Design **Credits: 3.00**

Digital Video and Cinema Concentration Total: 42 Credit Hours

Interactive Design Concentration

This concentration serves students interested in digital convergence – the delivery of content via multiple media formats such as text, images, audio, video and interactive websites. Students are involved in content creation and distribution using diverse communications media and are prepared for a variety of roles in media industries. Class work and practical experiences are grounded in online media and provide students with opportunities to develop additional skills using other media formats. At the same time, the program encourages students to obtain a broad liberal arts education so they will understand the theories, design, legalities and applications of convergence in society.

SMAD Core Requirements *Credits: 21.00*

SMAD 307. Interactive Design Web I **Credits: 3.00**

SMAD 317. User Interaction Design **Credits: 3.00**

SMAD 417. Business and Management of Interactive Design **Credits: 3.00**

Choose one Intermediate Applied Skills courses: 3 Credit Hours

SMAD 305. Special Topics in Media Production **Credits: 3.00**²

SMAD 308. Interactive Design II **Credits: 3.00**

SMAD 315. Digital Social Media Advertising **Credits: 3.00**

SMAD 327. User-Centered Research and Usability Evaluation **Credits: 3.00**

SMAD 332. Visual Communication Design **Credits: 3.00**

Choose one Advanced Applied Skills courses: 3 Credit Hours

SMAD 404. Advanced Interactive Design **Credits: 3.00**

SMAD 408. Converged Media Lab **Credits: 3.00**

Choose two Critical Analysis courses: 6 Credit Hours

SMAD 360L. British Media and Society **Credits: 3.00**
 SMAD 371. Narrative Media Studies **Credits: 3.00**
 SMAD 372. Media History **Credits: 3.00**
 SMAD 373. Media Analysis and Criticism **Credits: 3.00**
 SMAD 380. Introduction to Film **Credits: 3.00**
 SMAD 398. Critical Studies in Media Arts and Design **Credits: 3.00**²
 SMAD 460. Film and Society **Credits: 3.00**
 SMAD 461. Film as Art **Credits: 3.00**
 SMAD 462. Documentary in Film and Television **Credits: 3.00**

SMAD 463. Film Adaptations **Credits: 3.00**
 or
 SMAD 463L. Film Adaptations **Credits: 3.00**

SMAD 464. Contemporary American Film **Credits: 3.00**
 SMAD 465. The Entertainment Industry **Credits: 3.00**³
 SMAD 470. New Media and Society **Credits: 3.00**
 SMAD 471. Media Ethics **Credits: 3.00**
 SMAD 472. Media and Politics **Credits: 3.00**⁴
 or
 SMAD 472L. Media and Politics **Credits: 3.00**⁴
 SMAD 498. Senior Seminar in Media Arts and Design **Credits: 3.00**

Interactive Design Concentration Total: 42 Credit Hours

Journalism Concentration

This professionally-oriented program enables students to develop reporting, writing, editing and production skills needed to work in magazines, newspapers, video/broadcast and new media journalism through course work, internships and other practical experiences. At the same time the program encourages students to obtain a broad liberal arts education so they will understand many of the issues facing contemporary society.

SMAD Core Requirements *Credits: 21.00*
 SMAD 210. News Reporting and Writing **Credits: 3.00**¹
 SMAD 309. Video Journalism **Credits: 3.00**
 SMAD 310. Advanced Reporting and Writing **Credits: 3.00**
 SMAD 471. Media Ethics **Credits: 3.00**

Choose one Intermediate Applied Skills courses: 3 Credit Hours

SMAD 220. Copy Editing **Credits: 3.00**
 SMAD 225. Photojournalism **Credits: 3.00**
 SMAD 305. Special Topics in Media Production **Credits: 3.00**
 SMAD 307. Interactive Design Web I **Credits: 3.00**
 SMAD 315. Digital Social Media Advertising **Credits: 3.00**
 SMAD 327. User-Centered Research and Usability Evaluation **Credits: 3.00**
 SMAD 332. Visual Communication Design **Credits: 3.00**
 SMAD 403. Documentary Production **Credits: 3.00**

Choose one Advanced Applied Skills courses: 3 Credit Hours

SMAD 409. Electronic News Producing and Editing **Credits: 3.00**
 SMAD 421. Feature Magazine Production **Credits: 3.00**
 SMAD 422. Multimedia Journalism **Credits: 3.00**
 SMAD 497. Advanced Projects in Media Arts and Design **Credits: 3.00** (*when topic is appropriate*)

Choose one Critical Analysis course: 3 Credit Hours

SMAD 360L. British Media and Society **Credits: 3.00**
 SMAD 371. Narrative Media Studies **Credits: 3.00**
 SMAD 372. Media History **Credits: 3.00**
 SMAD 373. Media Analysis and Criticism **Credits: 3.00**
 SMAD 380. Introduction to Film **Credits: 3.00**
 SMAD 398. Critical Studies in Media Arts and Design **Credits: 3.00**²
 SMAD 460. Film and Society **Credits: 3.00**
 SMAD 461. Film as Art **Credits: 3.00**
 SMAD 462. Documentary in Film and Television **Credits: 3.00**

SMAD 463. Film Adaptations **Credits: 3.00**
 or
 SMAD 463L. Film Adaptations **Credits: 3.00**

SMAD 464. Contemporary American Film **Credits: 3.00**
 SMAD 465. The Entertainment Industry **Credits: 3.00**³
 SMAD 470. New Media and Society **Credits: 3.00**
 SMAD 471. Media Ethics **Credits: 3.00**
 SMAD 472. Media and Politics **Credits: 3.00**⁴
 or
 SMAD 472L. Media and Politics **Credits: 3.00**⁴
 SMAD 498. Senior Seminar in Media Arts and Design **Credits: 3.00**

Journalism Concentration Total: 42 Credit Hours

Footnotes

¹ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

² These courses satisfy concentration requirements when the topic is appropriate.

³ This course is offered in the JMU in LA summer study away program.

⁴ Students may receive SMAD credit for either SMAD 301 or SMAD 301L, and SMAD 472 or SMAD 472L, but not both.

⁵ This course is offered in the JMU in New York summer study away program.

Recommended Schedule for Majors

First Year

SMAD 101. Introduction to Media Arts and Design **Credits: 3.00**

Cluster One courses *Credits: 9.00*
General Education courses *Credits: 18.00*

First Year Total: 30 Credit Hours

Second Year

SMAD 201. Foundations of Visual Communication Design **Credits: 3.00**
SMAD 202. Foundations of Audio-Visual Storytelling **Credits: 3.00**
SMAD 203. Foundations of User Experience Design **Credits: 3.00**
SMAD 204. Foundations of Media Storytelling and Research **Credits: 3.00**
General Education courses *Credits: 10.00-13.00*
University electives *Credits: 5.00-8.00*

Second Year Total: 30 Credit Hours

Third Year

SMAD 301. The Media Arts: Culture By Design **Credits: 3.00**
or
SMAD 301L. The Media Arts: Culture By Design **Credits: 3.00**
SMAD Concentration courses *Credits: 9.00 - 12.00*
University electives *Credits: 15.00 - 18.00*

Third Year Total: 30 Credit Hours

Fourth Year

SMAD 400. Senior Assessment in Media Arts and Design **Credits: 0.00**
SMAD 450. Law of Media Arts and Design **Credits: 3.00**
SMAD Concentration courses *Credits: 9.00 - 12.00*
University electives *Credits: 15.00 - 18.00*

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Media Arts and Design major; B.S. degree option

Program Description

The School of Media Arts and Design incorporates the study of mass media and mediated visual and aural expression, focusing on creative advertising, video and cinema production, interactive design, journalism, film studies, and creative writing. SMAD offers a program of study that prepares students for careers in the media and/or corporate environments that rely on mass media and related areas of expertise, or graduate study in mass communication and related areas.

Admission and Minimum Grades

Special Admission and Retention Requirements

Admission to the School of Media Arts and Design is limited and competitive. There are two pathways to full admission to the SMAD major.

Direct Admission

Entering first year and transfer students who are awarded a competitive scholarship by the university, the College of Arts and Letters, or by the School of Media Arts and Design will be fully and directly admitted to SMAD. Those scholarships include the Dingleline-Bluestone Scholarships; the Senator Harry S. Byrd Jr.—D. Lathan Mims Renewable Scholarship; and the Alison B. Parker Memorial Renewable Scholarship. Their concentration will be determined by the SMAD Director, in consultation with faculty. Such scholarship holders are exempt from the admission application requirement but must fulfill any conditions attached to their awards.

Admission by Application

Students interested in majoring in the programs offered by the school must apply for a limited number of spaces in the major. An admission committee in the school reviews applications and offers admission based on availability to the most qualified students. A student may apply no more than two times for admission to the school.

September Application Period

The September application process is only for transfer students matriculating to JMU in the current fall semester or the immediately preceding spring or summer semesters and have declared the SMAD major. These students must be officially admitted to JMU as transfer students and must have earned at least 30 hours of JMU approved post high school college credit. They must be degree-seeking students and must be enrolled in at least 12 hours at JMU during the fall semester. The application is due at 4 p.m. on the second Friday of the fall semester.

Annual Application Period

Currently enrolled JMU students (including transfer students matriculating in January or in previous semesters) may apply during the annual application period that occurs in the spring semester. Students applying to the major at JMU must be degree-seeking and have completed at least 12 hours or be enrolled in at least 12 hours at JMU. The application is due at 4 p.m. on the third Friday of the spring semester. The exact date will be posted on the SMAD website.

Process

Students interested in applying for admission to this major must "declare" SMAD as a major and apply to become a "fully admitted" major. Declaring a SMAD major does not guarantee the student will be fully admitted into the SMAD major. Students must declare SMAD as a major prior to being eligible to enroll in SMAD 101. A declared SMAD student may take SMAD 101, but the student is restricted from SMAD courses beyond SMAD 101 until being fully admitted into the major.

A complete application to the major includes the following:

Completion of SMAD 101 or enrollment in SMAD 101. Students must earn a minimum grade of "C-" (minimum 70%) in SMAD 101 or they will have to retake the course. Students get only two attempts to earn a minimum of 70% in the course.

Completion of the SMAD Admission Test with sections on English grammar and usage, time writing samples and basic computer knowledge.

Submitting all required components on the "SMAD Admissions" Canvas course:

An application letter/personal essay expressing reasons for interest in your first-choice concentration. If you wish to be considered for a second-choice concentration, submit a separate letter specifically for that concentration. (A student will only be accepted into one concentration.)

Unofficial transcript(s). (Transfer students must include unofficial transcripts from previous institutions and JMU Transfer Credit Report.)

A SMAD Admissions Questionnaire on Canvas that asks about media creation and experience.

A SMAD Contract on Canvas.

Following review by the SMAD admission committee, students will be notified about their acceptance into the major. If accepted, students will be eligible to register for SMAD courses. Students not accepted into the major will be notified and may reapply the following January or a later January. Students may apply to the major no more than two times.

Change of Concentration

Students accepted into the major are assigned to a concentration. Students who wish to change concentrations after being accepted into the major may ask to do so only during the annual application period, which ends at 4 p.m. on the third Friday of the spring semester.

To request a different concentration, the student must submit on the "SMAD Admissions" Canvas course the following:

A letter explaining why the student is seeking that change. This letter should be addressed to the Admissions Committee and be no more than two pages in length.

A completed Concentration Change Application form, which the student can download from the "SMAD Admissions" Canvas course and fill out after consulting with their adviser and obtaining the adviser's signature. The student must scan in and submit the finished form to upload on the Canvas site.

The student's unofficial transcripts.

A student seeking a concentration change must request access to the "SMAD Admissions" Canvas course. Directions for doing so are posted on SMAD's website.

If the Admissions Committee approves the student's request, the application will be reviewed by the SMAD director, who will grant final permission to change concentrations. There are no guarantees that the change will be granted, and students who change concentrations will not receive overrides or prerequisite waivers to expedite graduation.

Minimum Grades

If a student enrolled in SMAD 101 is accepted into the major and makes an "F" in the course, the student will be dropped from the major. In order to be eligible to reapply for the major, the student must re-take SMAD 101 and reapply. If a student enrolled in SMAD 101 is accepted into the major and makes a "D+," "D" or "D-" in the course, the student may continue to take classes in the major; however, the student must retake SMAD 101 the next semester and earn a minimum grade of "C-". Students are limited to taking SMAD 101 twice. Failure to achieve a minimum grade of "C-" after the second time will result in the student being dropped from the major, including being dropped from any SMAD courses for which the student is preregistered, and the student may not reapply for admission to the major.

To graduate with a major in media arts and design, a student must have a minimum grade point average of 2.0 ("C") in the major.

Degree and Major Requirements

A student must complete a minimum of 39 SMAD credits. In addition to courses in the School of Media Arts and Design, students must complete at least 75 non-SMAD credits.

Degree Requirement	Credit Hours
General Education ¹	41
Quantitative requirement ^{2,3}	3
Scientific Literacy requirement ^{2,3}	3-4
University electives	24-25
Major requirements ⁴	48
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill.

² In addition to course work taken to fulfill General Education requirements.

³ The quantitative and scientific literacy requirements may be satisfied by courses in the breadth requirement for the major.

⁴ A student must complete a minimum of 48 credits for the SMAD major (42 SMAD credits and 6 non-SMAD B.S. breadth credits). In addition to courses in the School of Media Arts and Design, students must complete at least 72 non-SMAD credits.

Major Requirements

Core Requirements: 21 Credit Hours

SMAD 101. Introduction to Media Arts and Design **Credits: 3.00**

SMAD 201. Foundations of Visual Communication Design **Credits: 3.00**

SMAD 202. Foundations of Audio-Visual Storytelling **Credits: 3.00**

SMAD 203. Foundations of User Experience Design **Credits: 3.00**

SMAD 204. Foundations of Media Storytelling and Research **Credits: 3.00**

SMAD 301. The Media Arts: Culture By Design **Credits: 3.00** ¹
or
SMAD 301L. The Media Arts: Culture By Design **Credits: 3.00** ¹
SMAD 400. Senior Assessment in Media Arts and Design **Credits: 0.00**
SMAD 450. Law of Media Arts and Design **Credits: 3.00**

Footnote

¹ Students may receive SMAD credit for either SMAD 301 or SMAD 301L, but not both.

Breadth Requirement: 6 Credit Hours

To be accomplished visual storytellers, students seeking a degree in media arts and design require extra breadth in either foreign language and philosophy or scientific and quantitative literacy. Students seeking a Bachelor of Science degree in media arts and design must complete two courses (six hours) from any of the following areas: anthropology (ANTH), astronomy (ASTR), biology (BIO), chemistry (CHEM), computer science (CS), economics (ECON), geography (GEOG), geology (GEOL), integrated science and technology (ISAT), intelligence analysis (IA), interdisciplinary science (ISCI), kinesiology (KIN), mathematics (MATH), physics (PHYS), political science (POSC) and sociology (SOCI).

Notes: Classes that satisfy the breadth requirements for SMAD that qualify as satisfying the university's degree requirements will also fulfill the university degree requirements. In no case may a student double-count a general education class toward the university B.A. or B.S. degree requirements.

Concentration (courses listed below): 21 Credit Hours

SMAD majors apply for and are assigned to one of four concentrations (creative advertising, digital video and cinema, interactive design, journalism), and must complete all requirements for that concentration. Students are restricted from taking classes in other concentrations unless there is room and permission is granted.

Major Requirements Total: 48 Credit Hours

Media Arts and Design Concentrations

Creative Advertising Concentration

This professionally-oriented concentration provides students with the knowledge and skills to create and manage advertising programs emphasizing new media. In addition to the theoretical concepts underlying advertising, students learn strategic creative writing, effective message design and media production. Students also learn strategic planning, implementation and evaluation of new media technologies, and research and analysis of current trends and applications. The program reviews ethical and legal issues involved in the creative advertising process and the use of new media. Students planning careers in creative advertising should obtain a broad liberal arts education to better understand the characteristics that make the diversified communication process effective across various media and organizations.

SMAD Core Requirements **Credits: 21.00**
SMAD 242. Introduction to Advertising and New Media **Credits: 3.00**
SMAD 252. Copywriting for Advertising **Credits: 3.00** ¹
SMAD 342. Elements of Creative Advertising **Credits: 3.00**
SMAD 443. Creative Advertising Campaigns **Credits: 3.00**

Choose one of the following Applied Skills courses: 3 Credit Hours

SMAD 210. News Reporting and Writing **Credits: 3.00**
SMAD 220. Copy Editing **Credits: 3.00**
SMAD 225. Photojournalism **Credits: 3.00**
SMAD 305. Special Topics in Media Production **Credits: 3.00** ²
SMAD 307. Interactive Design Web I **Credits: 3.00**
SMAD 310. Advanced Reporting and Writing **Credits: 3.00**
SMAD 315. Digital Social Media Advertising **Credits: 3.00**
SMAD 327. User-Centered Research and Usability Evaluation **Credits: 3.00**
SMAD 332. Visual Communication Design **Credits: 3.00**
SMAD 442. Functions of Corporate Communication **Credits: 3.00**

Choose two of the following Critical Analysis courses: 6 Credit Hours

SMAD 360L. British Media and Society **Credits: 3.00**
SMAD 371. Narrative Media Studies **Credits: 3.00**
SMAD 372. Media History **Credits: 3.00**
SMAD 373. Media Analysis and Criticism **Credits: 3.00**
SMAD 380. Introduction to Film **Credits: 3.00**
SMAD 398. Critical Studies in Media Arts and Design **Credits: 3.00** ²
SMAD 460. Film and Society **Credits: 3.00**
SMAD 461. Film as Art **Credits: 3.00**
SMAD 462. Documentary in Film and Television **Credits: 3.00**

SMAD 463. Film Adaptations **Credits: 3.00**
or
SMAD 463L. Film Adaptations **Credits: 3.00**

SMAD 464. Contemporary American Film **Credits: 3.00**
SMAD 465. The Entertainment Industry **Credits: 3.00** ³
SMAD 470. New Media and Society **Credits: 3.00**
SMAD 471. Media Ethics **Credits: 3.00**

SMAD 472. Media and Politics **Credits: 3.00** ⁴
or
SMAD 472L. Media and Politics **Credits: 3.00** ⁴
SMAD 498. Senior Seminar in Media Arts and Design **Credits: 3.00**

Creative Advertising Concentration Total: 42 Credit Hours

Digital Video and Cinema Concentration

The core mission of the digital video and cinema concentration is to prepare students to be visual storytellers. Students will develop a broad understanding

of the aesthetics, techniques and technologies that embody the visual storytelling process as well as a critical perspective of how media tools are used to create content, convey information and impact audiences.

The program offers preparation in writing, development, production and post-production in various genres, and an exploration of the continuously evolving commercial and artistic potential of visual media and story. Digital video and cinema students are encouraged to complement their concentration with a robust liberal arts experience that could include a minor and/or a second major. An internship is also recommended.

SMAD Core Requirements **Credits: 21.00**
SMAD 302. Video Production **Credits: 3.00**

Choose one of the following: 3 Credit Hours

SMAD 250. Scriptwriting **Credits: 3.00**
SMAD 251. Screenplay Writing **Credits: 3.00**
SMAD 253. The Shooting Script: The Process of Script to Screen **Credits: 3.00**⁵

Choose one of the following: 3 Credit Hours

SMAD 407. Business and Management of Digital Media **Credits: 3.00**
SMAD 410. The Creative Producer **Credits: 3.00**³

Choose two of the following Applied Skills courses: 6 Credit Hours

SMAD 303. Post Production **Credits: 3.00**
SMAD 304. Audio Production **Credits: 3.00**
SMAD 305. Special Topics in Media Production **Credits: 3.00**
SMAD 306. Studio Production **Credits: 3.00**
SMAD 340. Advanced Screenplay Writing **Credits: 3.00**
SMAD 402. Motion Graphic Design and Production **Credits: 3.00**
SMAD 403. Documentary Production **Credits: 3.00**
SMAD 405. Producing and Directing **Credits: 3.00**
SMAD 462. Documentary in Film and Television **Credits: 3.00**

SMAD 463. Film Adaptations **Credits: 3.00**
or
SMAD 463L. Film Adaptations **Credits: 3.00**

Choose two of the following Critical Analysis courses: 6 Credit Hours

SCOM 360L. British Media and Society **Credits: 3.00**
SMAD 371. Narrative Media Studies **Credits: 3.00**
SMAD 372. Media History **Credits: 3.00**
SMAD 373. Media Analysis and Criticism **Credits: 3.00**
SMAD 380. Introduction to Film **Credits: 3.00**
SMAD 398. Critical Studies in Media Arts and Design **Credits: 3.00**²
SMAD 460. Film and Society **Credits: 3.00**
SMAD 461. Film as Art **Credits: 3.00**
SMAD 462. Documentary in Film and Television **Credits: 3.00**
SMAD 463. Film Adaptations **Credits: 3.00**

or
SMAD 463L. Film Adaptations **Credits: 3.00**
SMAD 465. The Entertainment Industry **Credits: 3.00**³
SMAD 464. Contemporary American Film **Credits: 3.00**
SMAD 470. New Media and Society **Credits: 3.00**
SMAD 471. Media Ethics **Credits: 3.00**

SMAD 472. Media and Politics **Credits: 3.00**⁴
or
SMAD 472L. Media and Politics **Credits: 3.00**⁴

SMAD 498. Senior Seminar in Media Arts and Design **Credits: 3.00**

Digital Video and Cinema Concentration Total: 42 Credit Hours

Interactive Design Concentration

This concentration serves students interested in digital convergence – the delivery of content via multiple media formats such as text, images, audio, video and interactive websites. Students are involved in content creation and distribution using diverse communications media and are prepared for a variety of roles in media industries. Class work and practical experiences are grounded in online media and provide students with opportunities to develop additional skills using other media formats. At the same time, the program encourages students to obtain a broad liberal arts education so they will understand the theories, design, legalities and applications of convergence in society.

SMAD Core Requirements **Credits: 21.00**
SMAD 307. Interactive Design Web I **Credits: 3.00**
SMAD 317. User Interaction Design **Credits: 3.00**
SMAD 417. Business and Management of Interactive Design **Credits: 3.00**

Choose one Intermediate Applied Skills courses: 3 Credit Hours

SMAD 305. Special Topics in Media Production **Credits: 3.00**²
SMAD 308. Interactive Design II **Credits: 3.00**
SMAD 315. Digital Social Media Advertising **Credits: 3.00**
SMAD 327. User-Centered Research and Usability Evaluation **Credits: 3.00**
SMAD 332. Visual Communication Design **Credits: 3.00**

Choose one Advanced Applied Skills courses: 3 Credit Hours

SMAD 404. Advanced Interactive Design **Credits: 3.00**
SMAD 408. Converged Media Lab **Credits: 3.00**

Choose two Critical Analysis courses: 6 Credit Hours

SMAD 360L. British Media and Society **Credits: 3.00**
SMAD 371. Narrative Media Studies **Credits: 3.00**
SMAD 372. Media History **Credits: 3.00**
SMAD 373. Media Analysis and Criticism **Credits: 3.00**

SMAD 380. Introduction to Film **Credits: 3.00**
SMAD 398. Critical Studies in Media Arts and Design **Credits: 3.00**²
SMAD 460. Film and Society **Credits: 3.00**
SMAD 461. Film as Art **Credits: 3.00**
SMAD 462. Documentary in Film and Television **Credits: 3.00**

SMAD 463. Film Adaptations **Credits: 3.00**
or
SMAD 463L. Film Adaptations **Credits: 3.00**

SMAD 464. Contemporary American Film **Credits: 3.00**
SMAD 465. The Entertainment Industry **Credits: 3.00**³
SMAD 470. New Media and Society **Credits: 3.00**
SMAD 471. Media Ethics **Credits: 3.00**
SMAD 472. Media and Politics **Credits: 3.00**⁴
or
SMAD 472L. Media and Politics **Credits: 3.00**⁴
SMAD 498. Senior Seminar in Media Arts and Design **Credits: 3.00**

Interactive Design Concentration Total: 42 Credit Hours

Journalism Concentration

This professionally-oriented program enables students to develop reporting, writing, editing and production skills needed to work in magazines, newspapers, video/broadcast and new media journalism through course work, internships and other practical experiences. At the same time the program encourages students to obtain a broad liberal arts education so they will understand many of the issues facing contemporary society.

SMAD Core Requirements *Credits: 21.00*
SMAD 210. News Reporting and Writing **Credits: 3.00**¹
SMAD 309. Video Journalism **Credits: 3.00**
SMAD 310. Advanced Reporting and Writing **Credits: 3.00**
SMAD 471. Media Ethics **Credits: 3.00**

Choose one Intermediate Applied Skills courses: 3 Credit Hours

SMAD 220. Copy Editing **Credits: 3.00**
SMAD 225. Photojournalism **Credits: 3.00**
SMAD 305. Special Topics in Media Production **Credits: 3.00**
SMAD 307. Interactive Design Web I **Credits: 3.00**
SMAD 315. Digital Social Media Advertising **Credits: 3.00**
SMAD 327. User-Centered Research and Usability Evaluation **Credits: 3.00**
SMAD 332. Visual Communication Design **Credits: 3.00**
SMAD 403. Documentary Production **Credits: 3.00**

Choose one Advanced Applied Skills courses: 3 Credit Hours

SMAD 409. Electronic News Producing and Editing **Credits: 3.00**
SMAD 421. Feature Magazine Production **Credits: 3.00**

SMAD 422. Multimedia Journalism **Credits: 3.00**
SMAD 497. Advanced Projects in Media Arts and Design **Credits: 3.00** (*when topic is appropriate*)

Choose one Critical Analysis course: 3 Credit Hours

SMAD 360L. British Media and Society **Credits: 3.00**
SMAD 371. Narrative Media Studies **Credits: 3.00**
SMAD 372. Media History **Credits: 3.00**
SMAD 373. Media Analysis and Criticism **Credits: 3.00**
SMAD 380. Introduction to Film **Credits: 3.00**
SMAD 398. Critical Studies in Media Arts and Design **Credits: 3.00**²
SMAD 460. Film and Society **Credits: 3.00**
SMAD 461. Film as Art **Credits: 3.00**
SMAD 462. Documentary in Film and Television **Credits: 3.00**

SMAD 463. Film Adaptations **Credits: 3.00**
or
SMAD 463L. Film Adaptations **Credits: 3.00**

SMAD 464. Contemporary American Film **Credits: 3.00**
SMAD 465. The Entertainment Industry **Credits: 3.00**³
SMAD 470. New Media and Society **Credits: 3.00**
SMAD 471. Media Ethics **Credits: 3.00**
SMAD 472. Media and Politics **Credits: 3.00**⁴
or
SMAD 472L. Media and Politics **Credits: 3.00**⁴
SMAD 498. Senior Seminar in Media Arts and Design **Credits: 3.00**

Journalism Concentration Total: 42 Credit Hours

Footnotes

¹ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

² These courses satisfy concentration requirements when the topic is appropriate.

³ This course is offered in the JMU in LA summer study away program.

⁴ Students may receive SMAD credit for either SMAD 301 or SMAD 301L, and SMAD 472 or SMAD 472L, but not both.

⁵ This course is offered in the JMU in New York summer study away program.

Recommended Schedule for Majors

First Year

SMAD 101. Introduction to Media Arts and Design **Credits: 3.00**
Cluster One courses *Credits: 9.00*
General Education courses *Credits: 18.00*

First Year Total: 30 Credit Hours

Second Year

SMAD 201. Foundations of Visual Communication Design **Credits: 3.00**
SMAD 202. Foundations of Audio-Visual Storytelling **Credits: 3.00**
SMAD 203. Foundations of User Experience Design **Credits: 3.00**
SMAD 204. Foundations of Media Storytelling and Research **Credits: 3.00**
General Education courses *Credits: 10.00 - 13.00*
University electives *Credits: 5.00 - 8.00*

Second Year Total: 30 Credit Hours

Third Year

SMAD 301. The Media Arts: Culture By Design **Credits: 3.00**
or
SMAD 301L. The Media Arts: Culture By Design **Credits: 3.00**
SMAD Concentration courses *Credits: 9.00 - 12.00*
University electives *Credits: 15.00 - 18.00*

Third Year Total: 30 Credit Hours

Fourth Year

SMAD 400. Senior Assessment in Media Arts and Design **Credits: 0.00**
SMAD 450. Law of Media Arts and Design **Credits: 3.00**
SMAD Concentration courses *Credits: 9.00 - 12.00*
University electives *Credits: 15.00 - 18.00*

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Department of Middle, Secondary and Mathematics Education

Katie Dredger, **Department Head**
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Email: dredgemk@jmu.edu
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Website: <http://www.jmu.edu/coe/msme>

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M. Shoffner, A. Wallace

Associate Professors

K. Dredger, R. Higdon, S. Lupo, A. Sawyer, A. Webb

Assistant Professor

Z. Aga, L. Richards

Instructors

M. Wolfe

Teachers in Residence

L. Yoder

The Department of Middle, Secondary and Mathematics Education houses undergraduate and graduate programs that prepare students for teaching careers in middle and high school. All programs include extensive fieldwork to ensure varied experiences working with children and families in school settings.

Education: Middle Grades Education, B.S.

Program Description

Grades Six Through Eight Licensure Program

Middle Grades Education is an undergraduate program designed to develop content-area teachers for grades 6-8. In this major, students learn the developmental characteristics of students aged 10 to 14; the social, emotional, physical and intellectual abilities and needs of diverse middle school students; and the design of appropriate cross-disciplinary curriculum and instruction while completing multiple field experiences in local middle school classrooms.

This program of study provides students with course offerings and experiences that form the required foundation for licensure in middle education at James Madison University. Students major in middle grades education while completing licensure area course requirements in a discipline closely associated with the desired teaching area. The state-approved licensure areas in the middle grades education major at JMU are English, mathematics, science and social studies. While students must earn licensure in one concentration, it is also possible to work toward licensure in two concentrations. In most cases, licensure courses may be counted toward a minor. Licensure endorsements for specialized teaching areas (e.g., Algebra I, journalism, gifted education) are available as add-on endorsements. Students interested in pursuing any licensure option must consult with a program adviser regarding requirements and scheduling.

For successful completion of the Middle Grades Education major, students must earn a **minimum grade of "B-"** in all required Middle Grades Education courses in the middle education major (excludes WRTC 103, EDUC 200 and PSYC 160) and earn credit in all licensure area content course work to continue in and complete the licensure area.

Students should consult with a middle grades education adviser in their first year to obtain information concerning completion of General Education, major and licensure area requirements. In addition to declaring the middle grades education major, students must apply and meet the requirements for admission to teacher education. Students must be fully admitted to teacher education prior to registering for MSSE 370.

Note: Actual teacher licensure requirements may differ from the listed catalog requirements because of changes enacted by the Virginia Department of Education and/or national accrediting agencies. Students are encouraged to

confer regularly with their adviser to determine their progress toward graduation.

Admission Requirements

Students must meet specific requirements to be admitted to programs within the College of Education. These criteria can be found on the College of Education catalog page.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ^{1, 2, 3}	41
Quantitative Requirement	3
Scientific Literacy Requirement	3
Middle Grades Education Major Requirements ⁴	47
Licensure Area Course Requirements	28
Total	120

Footnotes

¹ General Education courses must include PSYC 160. While required for the major, credits for PSYC 160 are counted in the General Education total of 41 credit hours.

² The General Education program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within a program.

³ The number of credits taken to meet major and concentration requirements may vary if courses are double-counted for General Education or to meet quantitative or scientific literacy requirements.

⁴ Students are responsible for transportation to field placements at local schools.

Before beginning the licensure portion of the professional program, candidates must meet all criteria for admission to teacher education (e.g., minimum GPA of 2.5, passing VCLA score). Candidates must meet all additional requirements of the program before completion. Candidates must submit passing scores on the Praxis Subject Assessment prior to beginning MSSE 475.

Major Requirements

Core Requirements

- EDUC 200. Foundations of Education in the United States **Credits: 3.00**
- EDUC 310. Teaching in a Diverse Society **Credits: 3.00**
- EXED 200. Foundations of Exceptional Education **Credits: 3.00**
- LED 212. Foundations of Literacy for Middle School Teachers **Credits: 3.00**
- LED 440. Disciplinary Literacy in Secondary Education **Credits: 3.00**

- MIED 211. Field Experience in Middle Education **Credits: 1.00**
- MSSE 403. Behavior and Classroom Management in a Diverse Society **Credits: 3.00**
- MSSE 370. General Instructional Methods for Grades 6-12 **Credits: 3.00**
- MSSE 415. Content Area Field Experience in Middle Schools **Credits: 3.00**
- MSSE 420. Differentiation for Adolescents **Credits: 3.00**
- MSSE 425. Assessment in Middle and Secondary Education **Credits: 3.00**
- MSSE 450. Internship Seminar **Credits: 2.00**
- MSSE 455. Special Topics in Pedagogical Content Knowledge **Credits: 3.00**
- PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00** (these credits are counted in the General Education total, not the major total)

Total: 36 Credit Hours

Student Teaching/Internship Requirements

- MSSE 475. Internship in Middle and Secondary Education **Credits: 8.00**

Total: 8 Credit Hours

Concentrations

Choose one of the following concentrations.

English Concentration

- MSSE 411. English/Language Arts Teaching Methods, Grades 6-8 **Credits: 3.00**

English Concentration Total: 3 Credit Hours

Mathematics Concentration

- MSSE 413. Mathematics Teaching Methods, Grades 6-8 **Credits: 3.00**

Mathematics Concentration Total: 3 Credit Hours

Science Concentration

- MSSE 414. Natural Sciences Teaching Methods, Grades 6-8 **Credits: 3.00**

Science Concentration Total: 3 Credit Hours

Social Studies Concentration

- MSSE 412. Social Studies Teaching Methods, Grades 6-8 **Credits: 3.00**

Social Studies Concentration Total: 3 Credit Hours

Major Requirements Total: 47 Credit Hours

Recommended Schedule

First Year

- EDUC 200. Foundations of Education in the United States **Credits: 3.00**
- PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

General Education Cluster One **Credits: 18.00**
B.S. degree requirements **Credits: 3.00**

Total: 27 Credit Hours

Second Year

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**
EXED 200. Foundations of Exceptional Education **Credits: 3.00**
LED 212. Foundations of Literacy for Middle School Teachers **Credits: 3.00**
MIED 211. Field Experience in Middle Education **Credits: 1.00**
MSSE 370. General Instructional Methods for Grades 6-12 **Credits: 3.00**
General Education **Credits: 9.00**
B.S. degree requirements **Credits: 3.00**
Licensure Area Content Courses **Credits: 9.00**

Total: 34 Credit Hours

Third Year

Remaining General Education *11.00 Credit Hours*
Content courses *7.00-16.00 Credit Hours*

All students seeking licensure: 9 Credit Hours

MSSE 415. Content Area Field Experience in Middle Schools **Credits: 3.00**
MSSE 425. Assessment in Middle and Secondary Education **Credits: 3.00**
LED 440. Disciplinary Literacy in Secondary Education **Credits: 3.00**

Content Specific Methods Course: 3 Credit Hours

For those seeking English licensure:
MSSE 411. English/Language Arts Teaching Methods, Grades 6-8 **Credits: 3.00**
For those seeking social studies licensure:
MSSE 412. Social Studies Teaching Methods, Grades 6-8 **Credits: 3.00**
For those seeking mathematics licensure:
MSSE 413. Mathematics Teaching Methods, Grades 6-8 **Credits: 3.00**
For those seeking science licensure:
MSSE 414. Natural Sciences Teaching Methods, Grades 6-8 **Credits: 3.00**

Total: 30 Credit Hours

Fourth Year

Applications of Middle Grades Education

MSSE 403. Behavior and Classroom Management in a Diverse Society **Credits: 3.00**
MSSE 420. Differentiation for Adolescents **Credits: 3.00**
MSSE 450. Internship Seminar **Credits: 2.00**
MSSE 455. Special Topics in Pedagogical Content Knowledge **Credits: 3.00**
MSSE 475. Internship in Middle and Secondary Education **Credits: 8.00**
Licensure-Area Content Courses and/or Electives/Add-on
Endorsement **Credits: 10.00**

Total: 29 Credit Hours

Program Total: 120 Credit Hours

Education: Secondary Education, B.S.

Program Description

Grades Six through Twelve Licensure Program

The undergraduate major in secondary education provides candidates with course offerings and experiences that form the required foundation for licensure in secondary education through James Madison University. In addition to the secondary education major, students also complete a major in a discipline closely associated with the desired teaching area. The state-approved licensure areas in the secondary education concentration at JMU include English, mathematics, biology, chemistry, physics and history/social sciences. Licensure endorsements for other teaching areas (e.g., Algebra I, journalism and gifted education) are available as add-on endorsements. Students should contact the department of Middle, Secondary, and Mathematics Education for information concerning those programs.

For successful completion of the secondary education major, students must earn a **minimum grade of "B-"** in all required secondary education major courses (excludes EDUC 200, WRTC 103 and PSYC 160) and earn credit in all licensure area content coursework. Satisfactory completion of both the secondary education major and the content area major or equivalent are necessary to receive an endorsement recommendation through JMU for a teaching license.

Students should be aware that there is a teacher education admission process that must be completed after a secondary education major is declared. Students must be fully admitted to Teacher Education prior to registering for MSSE 370. Students should also note that actual teacher licensure requirements may differ from the catalog requirements listed because of changes enacted by the Virginia Department of Education or accrediting agencies after the catalog copy is approved. Therefore, it is important for students to confer regularly with their secondary education advisers.

Admission Requirements

Students must meet specific requirements to be admitted to programs within the College of Education. These criteria can be found on the College of Education catalog page.

Degree and Major Requirements

Degree and Major Requirements	Credit Hours
General Education ^{1,2}	41
Quantitative Requirement ³	3
Scientific Literacy Requirement ³	3

Degree and Major Requirements

Credit Hours

Secondary Education Major Requirements	47
Additional Content Major Requirements	36-56
Total	125-128

• NOTE: Because many of the Additional Content Major Requirements are also counted in the totals shown above for General Education, degree requirements and major requirements, students will take a total of 125-128 hours. See the Recommended Schedule of Classes for each content area for details.

Total: 125-128 Credit Hours

Footnotes

¹ General Education courses must include PSYC 160. While required for the major, credits for PSYC 160 are counted in the General Education total of 41 credit hours.

² The General Education program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within a program.

³ Quantitative and scientific literacy requirements may be fulfilled by courses required within the major.

Major Requirements

Secondary Core

EDUC 200. Foundations of Education in the United States **Credits: 3.00**
 EDUC 310. Teaching in a Diverse Society **Credits: 3.00**
 EXED 200. Foundations of Exceptional Education **Credits: 3.00**
 LED 440. Disciplinary Literacy in Secondary Education **Credits: 3.00**
 MSSE 370. General Instructional Methods for Grades 6-12 **Credits: 3.00**
 MSSE 403. Behavior and Classroom Management in a Diverse Society **Credits: 3.00**
 MSSE 415. Content Area Field Experience in Middle Schools **Credits: 3.00**
 MSSE 420. Differentiation for Adolescents **Credits: 3.00**
 MSSE 425. Assessment in Middle and Secondary Education **Credits: 3.00**
 MSSE 450. Internship Seminar **Credits: 2.00**
 PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00** (*these credits are counted in the General Education total, not the major total*)

Total: 29 Credit Hours

Education – Student Teaching / Internship

MSSE 475. Internship in Middle and Secondary Education **Credits: 8.00**

Total: 8 Credit Hours

Concentrations

Students should select one of the following concentration and complete 10 credits.

Chemistry, Biology or Physics Concentration

MSSE 414. Natural Sciences Teaching Methods, Grades 6-8 **Credits: 3.00**
 MSSE 444. Science Content Methods, Grades 9-12 **Credits: 2.00**
 MSSE 449. Science Field Placement, Grades 9-12 (Lab) **Credits: 1.00**
 MSSE 397. Science Pedagogy **Credits: 2.00**
 or
 PHYS 302. Science Pedagogy **Credits: 2.00**
 MSSE 495. Topics in Science Pedagogical Content Knowledge **Credits: 2.00**
 or
 BIO 489. Topics in Science Pedagogical Content Knowledge **Credits: 2.00**

English Concentration

LED 254. Literature for Adolescents **Credits: 3.00**
 MSSE 411. English/Language Arts Teaching Methods, Grades 6-8 **Credits: 3.00**
 MSSE 441. English/Language Arts Content Methods, Grades 9-12 **Credits: 3.00**
 MSSE 446. English Field Placement, Grades 9-12 (Lab) **Credits: 1.00**

Social Studies Concentration

MSSE 412. Social Studies Teaching Methods, Grades 6-8 **Credits: 3.00**
 MSSE 442. Social Studies Content Methods, Grades 9-12 **Credits: 3.00**
 MSSE 447. Social Studies Field Placement, Grades 9-12 (Lab) **Credits: 1.00**
 MSSE 455. Special Topics in Pedagogical Content Knowledge **Credits: 3.00**

Mathematics Concentration

MSSE 413. Mathematics Teaching Methods, Grades 6-8 **Credits: 3.00**
 MSSE 443. Mathematics Content Methods, Grades 9-12 **Credits: 3.00**
 MSSE 448. Mathematics Field Placement, Grades 9-12 (Lab) **Credits: 1.00**
 MSSE 455. Special Topics in Pedagogical Content Knowledge **Credits: 3.00**

Education Major and Student

Teaching/Internship Total: 47 Credit Hours

Recommended Schedule for Majors

First Year

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**
 EDUC 200. Foundations of Education in the United States **Credits: 3.00**
 General Education Cluster One **Credits: 18.00 -21.00**
 B.S. degree requirements **Credits: 3.00 - 6.00**

First Year Total: 27-33 Credit Hours

Second Year

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**
 EXED 200. Foundations of Exceptional Education **Credits: 3.00**
 MSSE 370. General Instructional Methods for Grades 6-12 **Credits: 3.00**
 General Education Cluster Two
 B.S. degree requirements

Second Year Total: 27-36 Credit Hours

Third Year

LED 440. Disciplinary Literacy in Secondary Education **Credits: 3.00**
MSSE 415. Content Area Field Experience in Middle Schools **Credits: 3.00**
MSSE 425. Assessment in Middle and Secondary Education **Credits: 3.00**
Remaining General Education **Credits: 8.00**
Content Major Courses **Credits: 15.00**
Content Specific Teaching Methods Course (*English, social studies, mathematics or science*): **Credits: 3.00**

Third Year Total: 35 Credit Hours

Fourth Year

MSSE 403. Behavior and Classroom Management in a Diverse Society **Credits: 3.00**
MSSE 420. Differentiation for Adolescents **Credits: 3.00**
MSSE 450. Internship Seminar **Credits: 2.00**
MSSE 475. Internship in Middle and Secondary Education **Credits: 8.00**¹
Licensure-Area Courses and/or Electives and/or Add-on Endorsement **Credits: 12.00**
Content Specific Methods Course (*English, social studies, mathematics or science*): **Credits: 2.00-3.00**
Pedagogical Content Knowledge Course **Credits: 2.00-3.00**
Content Field Placement Course **Credits: 1.00**

Fourth Year Total: 33-35 Credit Hours

Footnote

¹ Students are responsible for transportation to field placements at local schools.

Before beginning the licensure portion of the professional program, candidates must meet all criteria for admission to teacher education (e.g., minimum GPA of 2.5, passing VCLA score). Candidates are expected to complete all admission processes early in their sophomore year. Candidates must meet all additional requirements of the program before completion. Candidates must submit passing scores on the Praxis Subject Assessment prior to beginning MSSE 475.

Total: 125-128 Credit Hours

Pre-Professional Secondary Education (SEED) Minor

The pre-professional secondary education minor is designed to provide candidates with the prerequisite course offerings and experiences that form the required foundation for admission to the Master of Arts in Teaching (M.A.T.) dual degree program. Completion of the M.A.T. program is one of the pathways that can be selected for a recommendation for Virginia licensure in secondary education through JMU. Undergraduate candidates who are

planning to pursue licensure to teach in an academic area at the secondary school level in this dual degree pathway should complete the 20-22 credit hour pre-professional secondary education minor.

Candidates should also complete a major or the equivalent in one of the arts and sciences disciplines closely associated with the desired teaching area. The state-approved licensure areas in the secondary education program at JMU include English, mathematics, the natural sciences (biology, chemistry, physics, earth science) and history/social science (social studies). Licensure endorsements for other teaching areas (e.g., algebra) are available as add-on programs. Candidates should contact the departmental office for information concerning those programs.

Candidates should consult with the department head or an adviser in secondary education early during the first year or as soon, thereafter, as possible to obtain information concerning completing the related General Education and content area requirements, as well as the undergraduate and graduate education requirements.

This secondary education licensure program pathway is an integrated program of undergraduate and graduate dual degree requirements and experiences. It is important for candidates to understand that they must meet the requirements for a baccalaureate degree and that the appropriate undergraduate pre-professional courses (i.e. the pre-professional SEED minor) and experiences must be completed satisfactorily before they will be admitted to the M.A.T. program.

Candidates must earn a grade of "B-" or better (unless noted otherwise) in all required pre-professional undergraduate courses in the education program to continue in and complete the pre-professional program. In addition, a minimum undergraduate cumulative GPA of 2.5 is required for admission into the Teacher Education program. A minimum undergraduate cumulative GPA of 2.7 is required for admission to the graduate program. All students applying to the M.A.T. in Education must ensure they complete a minimum of 120 undergraduate credits to receive their bachelor's degree.

Consult the Graduate Catalog for M.A.T. graduate requirements. If utilizing this pathway to licensure, admission to and the satisfactory completion of the M.A.T. program are required in order to receive a recommendation through JMU for a teaching license at the secondary school level.

Candidates should note that, at times, actual teacher licensure requirements may differ from the catalog requirements listed for a program because changes enacted by the Virginia Department of Education or accrediting agencies may have occurred after the catalog copy was approved. Therefore, it is important for students to confer with their education advisers on a regular basis.

Prerequisites to the Minor: 6 Credit Hours

Students must have completed these prerequisite requirements prior to applying for the initial application to teaching education:

WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**^{1,2}
PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**¹

Teacher Education Core Course: 3 Credit Hours

Students must complete this prerequisite requirement as part of the initial application to teaching education:

EDUC 200. Foundations of Education in the United States **Credits: 3.00**¹

Orientation to the Profession: 1-3 Credit Hours

Select one of the following courses, which can be taken prior to applying to teacher education.

CSM 199. Science Outreach in Schools **Credits: 1.00**

MSSE 101. Orientation to the Profession **Credits: 1.00**³ (*fall and spring*)

MSSE 201. Introduction to Social Studies Education Seminar **Credits: 3.00**³ (*spring only*)

Required Upper Level Course: 3 Credit Hours

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**^{3,4}

General Instructional Methods (GIM) and Initial Field Placement (IFP): 4 Credit Hours

GIM courses:

MSSE 370. General Instructional Methods for Grades 6-12 **Credits: 3.00**^{3,5}

IFP courses:

Choose one course from the following. Must equal a minimum of 4.00 credits with GIM course.

MSSE 371. Clinical Experience in Adolescent Education **Credits: 1.00**^{3,5}

MSSE 430. Introduction to Mentoring Valley Scholars **Credits: 3.00**³ (*fall term start; contact MSME office for more information*)

Content Teaching Methods, Field Placement and Literacy: 9 Credit Hours

LED 440. Disciplinary Literacy in Secondary Education **Credits: 3.00**³

Content Specific Teaching Methods, Grades 6-8: 3 Credit Hours

Choose the content specific teaching methods course.

MSSE 411. English/Language Arts Teaching Methods, Grades 6-8 **Credits: 3.00**^{3,6}

MSSE 412. Social Studies Teaching Methods, Grades 6-8 **Credits: 3.00**^{3,6,7}

MSSE 413. Mathematics Teaching Methods, Grades 6-8 **Credits: 3.00**^{3,6}

MSSE 414. Natural Sciences Teaching Methods, Grades 6-8 **Credits: 3.00**^{3,6}

Field Experience in Middle Grades Education: 3 Credit Hours

MSSE 415. Content Area Field Experience in Middle Schools **Credits: 3.00**

Total: 20-22 Credit Hours

Footnotes

¹ Minimum grade of "C" is required.

² Students who do not receive a minimum grade of "C" in this course may retake the course or take an equivalent writing course and pass with a minimum grade of "C." Contact the department to determine what course would be most appropriate.

³ Minimum grade of "B-" is required.

⁴ Course enrollment is blocked and requires initial application to Teacher Education.

⁵ Course enrollment is blocked and requires admission to Teacher Education.

⁶ Course work requires successful completion of EDUC 310, an orientation to the profession course, a general methods course and an initial field placement.

⁷ History or political science majors must enroll in POSC 457 as a corequisite to MSSE 412 and MSSE 415.

Recommended Schedule for Secondary Education Minor

First and/or Second Year

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**

Select one of the following courses:

CSM 199. Science Outreach in Schools **Credits: 1.00**

MSSE 101. Orientation to the Profession **Credits: 1.00**

MSSE 201. Introduction to Social Studies Education Seminar **Credits: 3.00** (*spring only*)

Additional Information

Students must declare the secondary education minor and be fully admitted into Teacher Education prior to enrolling in the remaining courses. Contact the departmental office to determine the requirements for admission to Teacher Education. The first four courses listed above are co-requisite offerings and must be completed before enrolling in next courses: EDUC 310, MSSE 370, MSSE 371/MSSE 430, which are then corequisites for the remaining three courses (MSSE 411/MSSE 412/MSSE 413/MSSE 414, MSSE 415, and LED 440).

Third and/or Fourth Year

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**

Select four credits from the following courses:

MSSE 370. General Instructional Methods for Grades 6-12 **Credits: 3.00**

MSSE 371. Clinical Experience in Adolescent Education **Credits: 1.00**

or

MSSE 430. Introduction to Mentoring Valley Scholars **Credits: 3.00**

Content Specific Teaching Methods, Grades 6-8:

Choose the content specific teaching methods course.

MSSE 411. English/Language Arts Teaching Methods, Grades 6-8 **Credits: 3.00**

MSSE 412. Social Studies Teaching Methods, Grades 6-8 **Credits: 3.00**

MSSE 413. Mathematics Teaching Methods, Grades 6-8 **Credits: 3.00**

MSSE 414. Natural Sciences Teaching Methods, Grades 6-8 **Credits: 3.00**

Field Experience in Middle Grades Education:

MSSE 415. Content Area Field Experience in Middle Schools **Credits: 3.00**

Total: 20-22 Credit Hours

Overall program requirements consist of six prerequisite credit hours plus 20-22 credit hours in the minor.

See the Graduate Catalog for the recommended schedule of courses for the M.A.T. in Education.

Department of Military Science

LTC Michael Davidson, **Department Head**

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Professor

M. Davidson

Associate Professors

K. Morris, D. Smith, M. Stewart, C. Chandler

Instructors

C. Platz, A. Perez, J. Yardley

Mission

The James Madison University Army ROTC Duke Battalion mission is to recruit, develop, educate and provide quality leadership training, practical hands-on

experience and Army values character development in order to commission agile and adaptive leaders to serve as the future officer leadership in the Army, Army Reserve or Army National Guard. Additionally, it is our mission to motivate young people through caring leadership to be better citizens committed to lifelong service of the community and nation.

Goals

The program offers two-, three- and four-year options, allowing students to complete the requirements to earn a commission as an Army officer. The three- and four-year programs consist of a basic course and an advanced course. A two-year option allows students with at least two academic years remaining in either undergraduate or graduate studies to complete all requirements for commissioning as a second lieutenant in the active Army, Army National Guard or Army Reserves. Additionally, students not intending to pursue a career in the military will gain valuable leadership, teambuilding and communication skills, which transfer into marketable civilian job skills.

Career Opportunities and Marketable Skills

Army ROTC provides students with highly marketable leadership skills. The curriculum imparts leadership principles, concepts of human development, and aspects of health and fitness. Practical application of classroom instruction in lab develops one's leadership style, communication and organizational skills, and strengthens personal character. Development of these skills implicitly builds one's self-confidence, discipline and professional attributes.

Army Reservists or Army National Guardsmen who are continuing their education full time may be eligible for the Simultaneous Membership Program, which combines Reserve Forces duty with Army ROTC on campus and enables the student to earn approximately \$5,000 in two years. Graduates of the program earn an Army commission and may serve four years in career areas as diverse as medical service, signal, infantry, law enforcement, aviation or nursing.

There are also opportunities for students seeking graduate degrees to delay going on active duty in order to pursue a graduate study program in law, medicine or other subjects. Further, Army ROTC scholarships are competitive for graduate students with no prior Army ROTC experience.

Co-curricular Activities and Organizations

- Color Guard
- JMU Cannon Crew
- JMU Ranger Group
- Army Ten Miler Team
- Ranger Challenge
- Cyber Club

Special Admission and Retention Requirements

Advanced military science courses are normally taken during the junior and senior years, or during graduate school. Qualified students pursuing a commission as a second lieutenant are contracted and paid a subsistence allowance of \$420 per month for up to 10 months during the school year. Prior to commissioning, each cadet must successfully complete the four-week ROTC Cadet Summer Training (CST) at Ft. Knox, Kentucky. Cadets must maintain at

least a 2.0 GPA, meet DoD medical fitness standards and meet Army physical fitness and weight control standards.

Air Force Reserve Officers Training Corps

Col. Jason B. Bell, **Department Head**

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Location: AFROTC Detachment 890

University of Virginia

P.O. Box 400188

Charlottesville, VA 22904-4188

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Professor

J. Bell

Associate Professors

G. Gilson, T. Robles, Z. Jones

Mission Statement

The Air Force ROTC program is designed to recruit, educate and commission officer candidates through college campus programs based on Air Force requirements. Units are located at 145 college and university campuses throughout the United States and Puerto Rico. Students from schools near Air Force ROTC host institutions can attend classes through separate crosstown enrollment programs or consortium agreements.

Goals

The Air Force Reserve Officers' Training Corps (AFROTC) program is offered and hosted at the University of Virginia and maintains a crosstown agreement with James Madison University. JMU students will take AFROTC classes at the University of Virginia for JMU credit. AFROTC provides a program of leadership development that prepares cadets for service as commissioned officers in the United States Air and Space Forces. After graduation, they assume active duty positions that are awarded prior to completion of the AFROTC program. To accomplish this, the Department of Air Science recruits, selects, retains and commissions officer candidates as second lieutenants in the United States Air Force and United States Space Force. AFROTC:

- Provides ethics and values education, stressing the Air Force core values of integrity first, service before self and excellence in all we do.
- Prepares cadets to be commissioned as second lieutenants through a curriculum that develops leadership and management skills and provides opportunities to use these skills in a variety of practical applications.
- Provides an understanding of how to lead and influence small organizations, with a strong emphasis on personal integrity, honor and individual responsibility. The techniques of effective leadership and quality management are stressed to achieve mission accomplishment.
- Enhances the cadets' understanding of the role of the military in society and provides an in-depth orientation to history and tradition of the Air Force and how the Air Force and Space Force serves the nation. This goal is reinforced

by summer hands-on leadership training and career orientation opportunities at Air Force bases around the country.

- Provides programs and experiences that increase self-confidence, self-discipline, accountability, physical stamina, poise and other traits essential to the development of a leader of character who is prepared to serve the nation in and out of uniform.

The curriculum and leader development programs of the Department of Air Science are mentally and physically challenging. Cadets learn basic military skills and participate in a physical conditioning program starting in the first year. The program develops cadets progressively from followership to leadership experiences and culminates with the fourth-year class cadets planning, organizing and administering all leadership training for the cadet wing. On-campus instruction is conducted both in the classroom by Air and Space Force officers and in the field environment by both officer and cadet leaders. A demanding summer field training encampment prior to the junior year prepares the cadets for acceptance into the commissioning track.

Air Force ROTC offers four-and three-year tracks. All cadets must complete four credits of AFROTC academics prior to a summer encampment. The three-year track cadets must complete both first and second year academic courses during their first year in ROTC. Students who have Junior ROTC, other-service ROTC, national guard, reserve or active duty military experience may request credit and advanced placement.

Unless the student earns an AFROTC scholarship, there is no service obligation inside the first two years of the four-year program. However, all students who enter into the Professional Officer Course (the last two years) enter into a contractual obligation with the Air Force or Space Force to serve on active duty upon commissioning.

After graduation and commissioning as second lieutenants in the Air Force or Space Force, graduates serve in any number of career fields for a minimum of a four-year active duty service commitment. Interested and qualified students may compete to become Air Force pilots, combat systems officers (CSO), air battle managers (ABM) or remotely piloted aircraft pilots (RPA). Successful pilot candidates serve a 10-year active duty service commitment, and CSO, ABM or RPA candidates incur a six-year active duty service commitment after completion of career field training. All service commitments begin after completion of career field training.

Co-curricular Activities and Organizations

- Arnold Air Society
- Drill Team

Special Admission and Retention Requirements

The Professional Officer Course is normally taken during the junior and senior years. Qualified students pursuing a commission as a second lieutenant are contracted and paid a subsistence allowance of \$300-\$500 per month. Cadets must maintain at least a 2.5 GPA, meet DoD medical fitness standards and meet Air Force physical fitness and weight control standards.

AFROTC Scholarships

Merit-based financial scholarships may be offered to highly academically competitive and qualified students already enrolled in the program. Awardees

may be offered an AFROTC scholarship for full or partial college tuition, incidental fees and textbook allowances and a monthly subsistence allowance of \$300-\$500 depending on academic year. Scholarship students incur a military obligation after their first year.

Degree Requirements

The Leadership Laboratory (LLAB) course taken during the first year is a weekly laboratory that touches on the topics of Air Force customs and courtesies, health and physical fitness, and drill and ceremonies. The second year LLAB course provides students with the opportunity to demonstrate fundamental management skills and prepares them for Field Training. The third year LLAB course provides the opportunity to develop fundamental management skills while planning and conducting cadet activities. Finally, the fourth year LLAB course provides the opportunity to use leadership skills in planning and conducting cadet activities. It prepares students for commissioning and entry into the active-duty Air and Space Forces.

The curriculum is divided into two phases:

Phase One: General Military Courses

AIRS 100. Leadership Laboratory **Credits: 0.00-0.00** (every semester)
AIRS 110. Air Force Heritage and Values I **Credits: 1.00** (fall, first year)
AIRS 120. Air Force Heritage and Values II **Credits: 1.00** (spring, first year)
AIRS 210. Team and Leadership Fundamentals I **Credits: 1.00** (fall, second year)
AIRS 220. Team and Leadership Fundamentals II **Credits: 1.00** (spring, second year)

Total: 4 Credit Hours

Phase Two: Professional Officer Courses

AIRS 100. Leadership Laboratory **Credits: 0.00-0.00** (every semester)
AIRS 310. Leading People and Effective Communication I **Credits: 3.00** (fall, third year)
AIRS 320. Leading People and Effective Communication II **Credits: 3.00** (spring, third year)
AIRS 410. National Security Affairs/Preparation for Active Duty I **Credits: 3.00** (fall, fourth year)
AIRS 420. National Security Affairs/Preparation for Active Duty II **Credits: 3.00** (spring, fourth year)

Total: 12 Credit Hours

Military Leadership Minor

Minor Requirements

Courses

Basic military science courses *16 Credit Hours*
Advanced military science courses *24 Credit Hours*
Military History course (MSCI 150) *3 Credit Hours*

Total: 43 Credit Hours

Military Science

Special Admission and Retention Requirements

Advanced military science courses are normally taken during the junior and senior years, or during graduate school. Qualified students pursuing a commission as a second lieutenant are contracted and paid a subsistence allowance of \$420 per month for up to 10 months during the school year. Prior to commissioning, each cadet must successfully complete the four-week ROTC Cadet Summer Training (CST) at Ft. Knox, Kentucky. Cadets must maintain at least a 2.0 GPA, meet DoD medical fitness standards and meet Army physical fitness and weight control standards.

Program Requirements

This non-degree military science curriculum is divided into two phases:

Phase One: Basic Military Science

MSCI 100. Leadership Laboratory **Credits: 2.00** (two semesters)
MSCI 101. Introduction to Leadership and the Army **Credits: 2.00**
MSCI 102. Leadership Development Fundamentals **Credits: 2.00**
MSCI 200. Intermediate Leadership Laboratory **Credits: 2.00** (two semesters)
MSCI 201. Leadership Styles - Theory and Application **Credits: 2.00**
MSCI 202. Developing Leader Skills **Credits: 2.00**

Total: 16 Credit Hours

Note on basic military science

The basic course is open to all JMU students. There is no military obligation incurred for taking 100- and 200-level military science courses. This curriculum is designed to help students in the near-term as leaders on campus. The classes will also help students be more effective leaders in the long-term, whether they serve in the military or as leaders in civilian life. Topics addressed include problem solving, critical thinking, problem-solving methods, leadership theory, followership, group cohesion, goal setting, feedback mechanisms, physical fitness and land navigation.

Lessons are taught in a seminar format, emphasizing student discussions and practical exercises. Courses are open to all students with no prerequisites and no military obligation. Students must enroll in both the lab and the classroom instruction.

Placement credit for the basic course may be awarded through multiple programs including: prior military service, basic training, or successful completion of the ROTC summer leadership training course at Ft. Knox, Ky.

Phase Two: Advanced Military Science

MSCI 300. Advanced Leadership Laboratory **Credits: 3.00** (two semesters)
MSCI 310. Leading Small Organizations **Credits: 3.00**
MSCI 320. Developing Advanced Leader Skills **Credits: 3.00**
MSCI 400. Advanced Leadership Laboratory II **Credits: 3.00** (two semesters)

MSCI 410. Seminar Command Management **Credits: 3.00**
MSCI 420. Seminar on Officership Transition **Credits: 3.00**

Total: 24 Credit Hours

Note on advanced military science

The advanced course focuses on instruction and case studies which build leadership competencies and military skills in preparation for future responsibilities as Army officers and successful completion of the Leader Development Assessment Course (LDAC) at Ft. Knox, KY. Instruction includes the principles of war, decision-making processes, planning models and risk assessment. Advanced leadership instruction focuses on motivational theory, the role and actions of leaders, and organizational communications. Courses are only open to advanced course-contracted cadets with prerequisites and a military obligation is incurred

Scholarships

Contact the department's enrollment officers at (540) 568-3633 for scholarship information.

School of Music

John Allemeier, **Director**

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Website: <http://www.jmu.edu/music>

Professors

S. Baker, S. Barber, S. Bolstad, C. Carrillo, B. Chandler Cahill, A. Connell, D. Cottrell, W. Dabback, G. Dobner, C. Donakowski, C. Dotas, J. Gibson, J. Haney, W. Huang, A. Lankford, K. McMillan, L. Piitz, D. Pope, E. Ruple, M.J. Speare, K. Stees, P. Steinberg, C. Stevens, J. Taylor, J. van der Vat-Chromy, I. Zook

Associate Professors

P. Aponte, C. Cangelosi, E. Guinivan, W.B. Hayes, S. Jankauskas, J. Peterson, D. Phoenix-Neal, S. Suggs, J. Walker, J. Zyko

Assistant Professors

F. Beyers, R. Grimsby, M. Ishikawa, G. Lee, J. Ofcarcik

Lecturers

A. Birdsong, S. Ridders

Mission

The mission of the School of Music is to provide the highest level of musical training in a comprehensive program that prepares students in conducting, music education, music industry, music performance, theory, composition, music history and music studies and to prepare them to be thoughtful and productive citizens. Specifically, the school's mission is to:

- Select undergraduate and graduate majors and minors who have demonstrated a commitment to developing their musical skills and talents.
- Motivate music enthusiasts to explore musical concepts by exposing them to and including them in music performance, composition and education.
- Foster a sense of community that encourages intellectual curiosity, creative endeavor, cultural diversity and respect for various perspectives.
- Encourage excellence from faculty members as educators, researchers, performers, clinicians and supporters so that they develop students into motivated, competent professionals and outstanding world citizens.
- Provide music majors and non-music majors with knowledge of music and develop appropriate skill levels and musicianship.
- Offer curricula that prepare students to be professionals in music performance, composition, education or industry.
- Broaden students' understanding of music through innovative teaching, creative experiences and scholarly research.
- Provide a wide variety of cultural events for the JMU and Shenandoah Valley communities.
- Expose students to current technology employed in the music field, such as computers, music instruction software, electronic devices, and advanced audio and visual equipment.
- Prepare D.M.A. students to teach at the college level, not just in their principal areas but also in many of the core curriculum classes, such as theory, music history and music appreciation.

The School of Music is an accredited institutional member of the National Association of School of Music.

Objectives

The thirteen major degree concentrations are each designed to establish a set of skills and a knowledge base necessary for success as a practitioner in specific career areas in the broad field of music. These objectives are achieved through School of Music classes:

- Through core music classes, students will attain a general level of functional musicianship sufficient to begin and sustain a professional career in the music field.
- To gain awareness and basic competency in composition and analysis of the standard forms and styles of western music.
- To gain a broad historical perspective on the development of the forms and styles of western music, as well as diverse world music.
- To develop a knowledge base enabling the placement of music within stylistic and chronological eras through cues that can be aurally identified.
- To develop a minimal ability to use a piano keyboard in the study, analysis and performance of music.
- To learn and practice the basic skills of conducting a musical ensemble and leading a rehearsal.
- Through attendance at musical performances, students will gain awareness and acceptance of a broad variety of music, as well as of the traditional practices of concert musicians through listening to and watching others perform.
- Through specialized classes in each concentration, students will attain skills and attitudes necessary for the establishment and maintenance of a career as a professional musician.
- Students in the Bachelor of Music will take weekly lessons in a primary instrument until they have mastered the skills of performance on that instrument sufficiently well to pass the graduation level for the specific

concentration and to successfully complete a senior recital in performance or composition.

- Students perform regularly in a variety of settings, allowing them to gain a variety of professional-level performing experiences. At least one ensemble per semester is required of all Bachelor of Music students until they have completed all the major requirements. B.A. in Music students complete four semesters of ensemble.
- Students complete specialized classes at the upper levels to learn the skills and more concentrated knowledge bases of the individual concentration areas. These classes may be aimed at developing a broad survey knowledge of music literature or history in a particular segment of the repertoire, or at the discovery and development of skills needed in the field but not necessarily to be mastered through individual practice and performance.
- In some major concentrations, internships are required that put the student into the work world in a supervised off-campus learning activity designed to give practical workplace experience in the field.

Career Opportunities

The various programs offered by the school can lead students to a wide range of careers. Programs in performance or composition are intended for students who desire to continue their musical training in graduate programs that will prepare them for professional careers in performance, composition and/or teaching at the college level.

Those who elect the emphasis in music industry will be prepared for positions in a broad area of music-business occupations and for admission to graduate professional schools of business.

The music education program prepares students to teach vocal and/or instrumental music in public schools.

The music theatre program is designed to prepare vocal music majors for the field of popular Broadway musical theatre performance as well as for careers in opera and operetta.

The jazz studies program prepares students for the rigors of graduate study in jazz performance, equips students with the jazz vocabulary necessary for professional performance, and provides knowledge and skills necessary for employment in private instruction or as a jazz specialist in public schools.

The following list of careers is only a small sample of possibilities:

Artists' manager
Composer
Conductor
Entertainment lawyer
Music educator
Music journalist
Music librarian
Music software developer
Orchestra manager
Performing artist
Professional accompanist
Professor/teacher
Record producer

Co-curricular Activities and Organizations

These activities are open to all JMU students without audition:

Concert Band
Marching Royal Dukes
Men's and Women's Choruses

These activities are open to all JMU students with audition or instructor permission:

Bach Aria Group
Brass Ensembles
Camerata Strings
Chamber Orchestra
Chorale
Clarinet Choir
Collegium Musicum
Flute Choir
Guitar Ensemble
Horn Choir
Jazz Band
Jazz Chamber Ensembles
Jazz Ensemble
Madison Singers
Opera Theatre
Opera Theatre Orchestra
Percussion Ensemble
Piano Accompanying
Steel Drum Band
String Ensembles
Symphonic Band
Symphony Orchestra
Treble Chamber Choir
Trombone Choir
Trumpet Ensemble
Tuba and Euphonium Ensemble
Wind Symphony
Woodwind Ensembles

Class Fees

There is a once per semester fee for enrollment in MUAP 200, MUAP 214 and MUAP 300. Applied Music Lesson (Undergraduate). See MyMadison for details.

Music Scholarships

The entrance audition also serves as the scholarship audition. All music scholarships are awarded on the basis of merit. Recorded auditions will not qualify a prospective student for consideration to receive a music scholarship.

A transfer student on scholarship at another school can only be considered for a scholarship at JMU if the music executive of the current school sends a written release to the director of the School of Music.

Cross Disciplinary Minor

Music and Human Services Minor

General Music Minor

Minor Requirements

General Music Minor¹

Open to all JMU undergraduate students, the general music minor develops both the performing and non-performing musician's understanding of music. The minor requires the successful completion of six hours drawn from three areas – fundamentals, literature and history, and electives – for a total of 18 credit hours. Students must earn 50 percent of the required curriculum at JMU.

Required Courses

Fundamentals: 3-6 Credit Hours

MUS 131. Fundamentals of Music **Credits: 3.00**
MUS 140. Introduction to Music Theory and Aural Skills **Credits: 4.00**

Literature and History: 6-9 Credit Hours

MUS 200. Music and Culture [C2VPA] **Credits: 3.00**
MUS 203. Music in America [C2VPA] **Credits: 3.00**
MUS 206. Introduction to Global Music [C2VPA] **Credits: 3.00**
MUS 356. History of Jazz in America **Credits: 3.00**
MUS 357. Music Theatre History and Analysis **Credits: 3.00**

Electives – Any music course may count in this category: 6 Credit Hours

All music ensembles
MUI 221. Survey of Music Industry **Credits: 3.00**
MUI 315. Songwriting **Credits: 3.00**
MUI 422. Concert Production and Promotion **Credits: 3.00**
MUED 380. Music in the Elem School **Credits: 2.00**
MUS 204. History of Rock **Credits: 3.00**

MUS 240. Jazz Improvisation Laboratory I **Credits: 2.00**
or
MUS 440. Jazz Improvisation Laboratory II **Credits: 2.00**

Total: 18 Credit Hours

Footnote

¹ The minor in music does not qualify a student to teach music in Virginia public schools.

Jazz Studies Minor

Open to all undergraduate students at JMU, the jazz studies minor helps students majoring in other disciplines understand and perform the jazz art

form. The minor requires the successful completion of 14-15 credit hours in specified music courses and four credit hours in jazz ensembles. Students must earn 50 percent of the required curriculum at JMU.

Required Courses

Fundamentals: 14-15 credits total

MUS 240. Jazz Improvisation Laboratory I **Credits: 2.00**
MUS 356. History of Jazz in America **Credits: 3.00**
MUS 440. Jazz Improvisation Laboratory II **Credits: 2.00** (*must repeat three times for a total of 6.00 credit hours*)

Choose one option: 3-4 Credit Hours

MUS 131. Fundamentals of Music **Credits: 3.00**
or
MUS 140. Introduction to Music Theory and Aural Skills **Credits: 4.00**
or
MUS 255. Jazz Theory **Credits: 3.00**

Ensembles (choose from the following): 4 Credit Hours

MUAP 347. Jazz Ensemble **Credits: 1.00** (*repeatable*)
MUAP 348. Jazz Band **Credits: 1.00**
MUAP 355. Jazz Chamber Ensemble **Credits: 1.00**

Total: 18-19 Credit Hours

Music Industry Minor

Open to all JMU undergraduate students, the music industry minor provides students majoring in other disciplines with a foundation for exploring career opportunities in the entertainment industry. The minor requires successful completion of MUI 221. Survey of Music Industry; MUI 231. Legal Aspects of Music Industry and of an additional 12 elective credit hours. Students must earn 50 percent of the required curriculum at JMU.

Required Courses

MUI 221. Survey of Music Industry **Credits: 3.00**
MUI 231. Legal Aspects of Music Industry **Credits: 3.00**
MUI 230. Music Industry Gateway **Credits: 0.00**

Electives – Any MUI course may count in this category: 12 Credit Hours

MUI 324. Introduction to Audio Devices **Credits: 3.00**
MUI 330. Music Publishing **Credits: 3.00**
MUI 400. Pro Tools: Multitrack Recording and Music Production **Credits: 3.00**
MUI 405. Logic Pro: Synthesis and Sound Design **Credits: 3.00**

MUI 315. Songwriting **Credits: 3.00**
MUI 411. Audio Postproduction **Credits: 3.00**
MUI 422. Concert Production and Promotion **Credits: 3.00**
MUI 430. Artist Management **Credits: 3.00**
MUI 435. Marketing in Music Production **Credits: 3.00**
MUI 440. Entrepreneurship in Music Industry **Credits: 3.00**
MUI 492. Internship in Music Industry **Credits: 3.00 - 6.00**

Total: 18 Credit Hours

Music, B.A.

Program Description

The Bachelor of Arts in Music degree offers students the benefits of both first-rate artistic training and the flexibility to explore the offerings of a comprehensive university experience. In addition to a rigorous core music experience, students in this degree program take several courses outside of music, with the option to add one or more minors or a second major.

The B.A. in Music offers two concentrations (music studies and music industry), both of which consist of a music core of 34 credit hours in addition to the general education program. As part of this music core, students enroll in MUS 195, attending a minimum of 10 recitals per semester for four semesters (totaling 40 concerts) until the requirement is fulfilled. The remaining hours are specified under each concentration below. To be admitted to the program, B.A. in Music students submit an application and complete an interview. Those applying for music industry also submit a portfolio. Students can opt to audition to study voice or an instrument with our faculty if they wish.

Special Admission and Retention Requirements

Admission Requirements

To be considered for undergraduate admission to the music program, all entering first year students, transfer students and previously enrolled students seeking re-admission must complete the following:

- Submit an application for admission to JMU's Office of Admission.
- Submit the Undergraduate Music Application.
- Successfully complete a B.A. in Music interview.

Those wishing to audition to study and instrument or voice will find guidelines on the music website.

Students are encouraged to contact the applied faculty on their area of performance expertise with specific questions about auditions. General questions about the music degree programs may be answered by an admissions assistant at (540) 568-3851 or by sending a message to music_admit@jmu.edu.

Audition, Exam and Placement Test

No student will be accepted into the music degree programs until an audition or interview is successfully completed.

Bachelor of Arts in Music candidates must complete an interview on one of the scheduled interview dates. The school does not encourage special appointments and will arrange them only when applicants have serious conflicts with the scheduled interviews.

The interview should reveal the student's interest and aptitude for music.

In addition to meeting the interview requirement above, all students who intend to major in the Bachelor of Arts in Music, emphasis in music industry or the music industry minor are required to first complete MUI 221 and then enroll in MUI 230 and MUI 231. To successfully complete MUI 230, prospective majors and minors must submit a portfolio for review, showing evidence of their interest and potential for success in the music industry. The portfolio should represent work completed in the above classes with assistance in resume preparation from University Career Center. Portfolios will be reviewed once each fall and once each spring semester. Following the portfolio review, students who are recommended for the major or minor will be eligible to register for upper level music industry classes. Students who are not recommended for admission to the major or minor may reapply the following semester. To obtain the schedule of portfolio review sessions, as well as other specific information about the admission process, contact the School of Music, music industry area.

Students who score a 4 or 5 on the Music Theory – Aural Subscore Advanced Placement exam may earn credit for MUS 143. Aural Skills I.

Retention Policy

Students admitted as music majors must meet school standards published in the **School of Music Student Handbook** to continue.

Music majors must earn a minimum grade of "C-" in all music courses required for their degree. In situations where courses are sequential, with prerequisites (for example, MUS 143-MUS 144 or MUS 243-MUS 244), if a grade lower than "C-" is earned, it does not constitute fulfillment of the prerequisite.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign language courses (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses) ³	3
Major Requirements	34
Concentration requirements	
• Music Industry Concentration	30
• Music Studies Concentration	18
University electives ⁴	4-30

Degree Requirements	Credit Hours
Total	126

MUAP 345. Symphony Orchestra **Credits: 1.00**
 MUAP 346. Wind Symphony **Credits: 1.00**
 MUAP 347. Jazz Ensemble **Credits: 1.00**
 MUAP 348. Jazz Band **Credits: 1.00**
 MUAP 353. Guitar Ensemble **Credits: 1.00**

Footnotes

¹ Some General Education requirements can be fulfilled through required course(s) in the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232), or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures placement test.

³ Any PHIL course except PHIL 120 or PHIL 150. Consult the list of courses satisfying Bachelor of Arts degree requirements on the Registrar's website.

⁴ For the Music Studies concentration, a maximum of 8 music credits may be taken as University electives.

Major Requirements

Core Courses: 18 Credit Hours

Incoming Music Major Assessment Milestone Credits: 0.00

MUS 143. Aural Skills I **Credits: 1.00**
 MUS 144. Aural Skills II **Credits: 1.00**
 MUS 195. Recital Attendance **Credits: 0.00** (*MUS 195 is taken four times*)
 MUS 206. Introduction to Global Music [C2VPA] **Credits: 3.00**
 MUS 207. History of Western Music **Credits: 3.00**
 MUS 208. Repertoire Lab for History of Western Music **Credits: 1.00**
 MUS 241. Diatonic and Chromatic Harmony **Credits: 3.00**
 MUS 243. Aural Skills III **Credits: 1.00**
 MUS 244. Aural Skills IV **Credits: 1.00**
 MUS 380. Musicological Perspectives **Credits: 3.00**
 MUS 381. Music Research Lab **Credits: 1.00**

School of Music Senior Assessment Milestone Credits: 0.00

Additional Requirement: 3 Credit Hours

Choose one course from the following:¹

MUS 252. Analysis of Music 1900-1950 **Credits: 3.00**
 MUS 253. Analysis of Music 1950-Present **Credits: 3.00**

Assigned Ensembles: 4 Credit Hours

MUAP 234. University Chorus: Tenor/Bass (UCTB) **Credits: 1.00**
 MUAP 235. Treble Chamber Choir **Credits: 1.00**
 MUAP 236. University Chorus: Soprano/Alto (UCSA) **Credits: 1.00**
 MUAP 238. Concert Band **Credits: 1.00**
 MUAP 239. Symphonic Band **Credits: 1.00**
 MUAP 340. Chorale **Credits: 1.00**
 MUAP 341. Madison Singers **Credits: 1.00**
 MUAP 343. Opera Theatre **Credits: 1.00 - 2.00**
 MUAP 344. Chamber Orchestra **Credits: 1.00**

Restricted Electives: 6 Credit Hours

Choose six credit hours from the following courses:

MUS 141. Foundations of Music Theory **Credits: 3.00**
 MUS 250. Form and Analysis: Baroque and Classical **Credits: 3.00**
 MUS 251. Form and Analysis: Romantic **Credits: 3.00**
 MUS 252. Analysis of Music 1900-1950 **Credits: 3.00** ¹
 MUS 253. Analysis of Music 1950-Present **Credits: 3.00** ¹
 MUS 254. Form and Analysis: Popular Music **Credits: 3.00**
 MUS 255. Jazz Theory **Credits: 3.00**
 MUS 256. Contrapuntal Techniques **Credits: 3.00**

Footnote

¹ These courses may not double count for other categories. The course selected to fulfill the "Required Music Course" category cannot also be used to fulfill the "Additional Required Music Courses" category.

Capstone Requirement: 3 Credit Hours

MUS 493. B.A. Capstone Project **Credits: 1.00 - 3.00** (*MUS 493 must be taken for 3.00 credit hours*)

Major Requirements Total: 34 Credit Hours Concentrations

Music Industry Concentration

Music Industry Core: 15 Credit Hours

MUI 221. Survey of Music Industry **Credits: 3.00**
 MUI 230. Music Industry Gateway **Credits: 0.00**
 MUI 231. Legal Aspects of Music Industry **Credits: 3.00**
 MUI 440. Entrepreneurship in Music Industry **Credits: 3.00**
 MUI 492. Internship in Music Industry **Credits: 3.00 - 6.00** (*MUI 492 must be taken for a total of 6.00 credit hours*)

College of Business courses: 9 Credit Hours

ACTG 244. Accounting for Non-Business Majors **Credits: 3.00**
 MGT 305. Organizational Behavior and Human Resource Management **Credits: 3.00**
 MKTG 380. Principles of Marketing **Credits: 3.00**

Music Industry Electives: 6 Credit Hours

Choose six credit hours from the following courses:

MUI 315. Songwriting **Credits: 3.00**
 MUI 324. Introduction to Audio Devices **Credits: 3.00**

MUI 330. Music Publishing **Credits: 3.00**
 MUI 400. Pro Tools: Multitrack Recording and Music Production **Credits: 3.00**
 MUI 405. Logic Pro: Synthesis and Sound Design **Credits: 3.00**
 MUI 415. Songwriting II **Credits: 3.00**
 MUI 422. Concert Production and Promotion **Credits: 3.00**
 MUI 423. Sound Reinforcement **Credits: 3.00**
 MUI 430. Artist Management **Credits: 3.00**
 MUI 435. Marketing in Music Production **Credits: 3.00**

Music Industry Concentration Total: 30 Credit Hours

University Electives: 4-18 Credit Hours

Music Studies Concentration

Music Electives: 18 Credit Hours

Any courses with the prefix for Applied Music (MUAP), Music Industry (MUI), Music (MUS), or Music Education (MUED) can be selected.

A maximum of four additional MUAP ensemble credits can be used to fulfill this category.

Music Studies Concentration Total: 18 Credit Hours

University Electives: 16-30 Credit Hours *

Footnote

A maximum of 8 music credits may be taken as University electives, per accreditation compliance.

Recommended Schedule for Majors

First Year - Fall

MUS 143. Aural Skills I **Credits: 1.00**
 MUS 195. Recital Attendance **Credits: 0.00**
 MUS 141. Foundations of Music Theory **Credits: 3.00**
 or
 MUS 241. Diatonic and Chromatic Harmony **Credits: 3.00**
 Ensemble **Credit: 1.00**
 General Education Cluster One courses **Credits: 6.00**
 Foreign Language or University Elective **Credits: 3.00**

First Year - Fall Total: 14 Credit Hours

First Year - Spring

MUS 144. Aural Skills II **Credits: 1.00**
 MUS 195. Recital Attendance **Credits: 0.00**
 MUS 206. Introduction to Global Music [C2VPA] **Credits: 3.00**
 Ensemble **Credit: 1.00**
 General Education Cluster One courses **Credits: 3.00**
 Foreign Language or University Elective **Credits: 3.00**
 Restricted Elective **Credits: 3.00**

First Year - Spring Total: 14 Credit Hours

Second Year - Fall

MUS 195. Recital Attendance **Credits: 0.00**
 MUS 207. History of Western Music **Credits: 3.00**
 MUS 208. Repertoire Lab for History of Western Music **Credits: 1.00**
 MUS 243. Aural Skills III **Credits: 1.00**
 MUS 252. Analysis of Music 1900-1950 **Credits: 3.00**
 or
 MUS 253. Analysis of Music 1950-Present **Credits: 3.00**
 Ensemble **Credit: 1.00**
 General Education **Credits: 3.00**
 Foreign Language or University Elective **Credits: 3.00**

Second Year - Fall Total: 15 Credit Hours

Second Year - Spring

MUS 195. Recital Attendance **Credits: 0.00**
 MUS 244. Aural Skills IV **Credits: 1.00**
 MUS 380. Musicological Perspectives **Credits: 3.00**
 MUS 381. Music Research Lab **Credits: 1.00**
 Ensemble **Credit: 1.00**
 General Education **Credits: 3.00**
 Foreign Language or University Elective **Credits: 3.00**
 Restricted Elective **Credits: 3.00**

Second Year - Spring Total: 15 Credit Hours

Third Year - Fall

University Degree Requirement: Philosophy Course **Credits: 3.00**
 General Education Cluster Three **Credits: 4.00**
 General Education **Credits: 3.00**
 Elective **Credits: 4.00**
 Concentration Course **Credits: 3.00**

Third Year - Fall Total: 17 Credit Hours

Third Year - Spring

General Education **Credits: 3.00**
 Electives or Concentration courses **Credits: 5.00**
 Concentration Courses **Credits: 9.00**

Third Year - Spring Total: 17 Credit Hours

Fourth Year - Fall

MUS 493. B.A. Capstone Project **Credits: 1.00 - 3.00** (MUS 493 taken for 1.00 credit)
 General Education courses **Credits: 6.00**

General Education Cluster Four **Credits: 4.00**
Elective **Credits: 3.00**
Electives or Concentration courses **Credits: 3.00**

Fourth Year – Fall Total: 17 Credit Hours

Fourth Year – Spring

MUS 493. B.A. Capstone Project **Credits: 1.00 – 3.00** (*MUS 493 taken for 2.00 credit*)
Restricted Elective **Credits: 3.00**
General Education **Credits: 3.00**
University Electives or Concentration courses **Credits: 9.00**

Fourth Year – Spring Total: 17 Credit Hours

Program Total: 126 Credit Hours

Music, B.M.

Program Description

The Bachelor of Music degree offers six specialized concentrations: performance, composition, music industry, music education, jazz studies and music theatre. All B.M. students must complete the General Education program and a 30-credit hour core program of music courses common to all the concentrations' curricula. The remaining hours are specified under each of the various concentrations.

All undergraduate music majors pursuing the Bachelor of Music, regardless of concentration, must perform on the primary instrument in one assigned ensemble each semester when one or more of the following indicators applies:

- They are enrolled for a minimum of 12 credit hours on campus.
 - They are enrolled for applied lessons on the primary instrument.
 - They have not completed all of the requirements in the music major.
 - They are not enrolled in an off-campus internship or in student teaching.
- While students are required to participate in only one assigned ensemble each semester, they are encouraged to take advantage of the many performance opportunities offered by the School of Music by participating in more than one ensemble. For information regarding the ensemble audition process, see the Undergraduate Music Student Handbook.

If piano is the primary instrument, see the specific requirements in the Undergraduate Music Student Handbook.

All Bachelor of Music students should enroll in class piano each semester until they meet the keyboard skills requirements appropriate to their specific degree or concentration.

Another vital aspect of the programs is attendance at recitals and concerts. Attending these events contributes to the breadth of students' knowledge of music literature. Hearing performances also allows students to observe performing techniques from the student to the professional levels.

Consequently, Bachelor of Music majors must attend a minimum of 10 recitals per semester for six semesters, totaling 60 attendances during their degree studies. Students must continue to register for MUS 195 until they fulfill this requirement.

Special Admission and Retention Requirements

Admission Requirements

To be considered for undergraduate admission to the music program, all entering first year students, transfer students and previously enrolled students seeking re-admission must complete the following:

- Submit an application for admission to JMU's Office of Admission.
 - Submit the Undergraduate Music Application.
 - Successfully complete a B.M. audition or B.A. in Music interview.
- Guidelines may be found on the music website.

Students are encouraged to contact the applied faculty on their area of performance expertise with specific questions about auditions. General questions about the music degree programs may be answered by an admissions assistant at (540) 568-3851 or by sending a message to music_admit@jmu.edu.

Audition, Exam and Placement Test

No student will be accepted into the music degree programs until an audition or interview is successfully completed.

Bachelor of Music candidates are expected to perform the entrance audition on one of the scheduled audition dates and Bachelor of Arts in Music candidates must complete an interview on one of the scheduled interview dates. The school does not encourage special appointments and will arrange them only when applicants have serious conflicts with the scheduled auditions.

Because assessing a student's ability through a recorded performance is difficult, only students who live at great distances are encouraged to send audition recordings. All recordings submitted must be of high quality and demonstrate the student's ability.

The audition should reveal the student's highest level of musical attainment. Appropriate literature in at least two varying styles and tempos is suggested so that the school can evaluate the candidate's ability accurately. If you have specific questions regarding appropriate audition literature, please contact the applied professor of your area of performance.

In addition to meeting the audition requirements above, all students who intend to major in the Bachelor of Music, emphasis in music industry or the music industry minor are required to first complete MUI 221 and then enroll in MUI 230 and MUI 231. To successfully complete MUI 230, prospective majors and minors must submit a portfolio for review, showing evidence of their interest and potential for success in the music industry. The portfolio should represent work completed in the above classes with assistance in resume preparation from the University Career Center. Portfolios will be reviewed once each fall and once each spring semester. Following the portfolio review, students who are recommended for the major or minor will be eligible to register for upper level music industry classes. Students who are not recommended for admission to the major or minor may reapply the following semester. To obtain

the schedule of portfolio review sessions, as well as other specific information about the admission process, contact the School of Music, music industry area.

Students who score a 4 or 5 on the Music Theory – Aural Subscore Advanced Placement exam may earn credit for MUS 143. Aural Skills I.

All major concentrations in the School of Music require potential candidates to develop additional qualifications before full admission to the concentrations. These gateways are generally attempted at the end of the first or second year in the major. For additional details, see the School of Music's Undergraduate Music Student Handbook.

Retention Policy

Students admitted as music majors must meet school standards published in the School of Music Student Handbook to continue.

Music majors must earn a minimum grade of "C-" in all music courses required for their degree. In situations where courses are sequential, with prerequisites (for example, MUS 143-MUS 144 or MUS 243-MUS 244), if a grade lower than "C-" is earned, it does not constitute fulfillment of the prerequisite.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education courses ¹	38-41
Core music program courses	30
Major and concentration requirements and electives	54-62
Professional education sequence ²	20
Total	123-133

Jazz Studies Concentration Requirements: 127-130 Credit Hours
Music Composition Concentration Requirements: 129-132 Credit Hours
Music Education, Instrumental Track Requirements: 127-130 Credit Hours ²
Music Education, Instrumental Track, Subtrack in Jazz Requirements: 130-133 Credit Hours ²
Music Education, Vocal Track Requirements: 128-132 Credit Hours ²
Music Industry Emphasis Requirements: 128 Credit Hours
Music Performance, Instrumental Track: 123-126 Credit Hours
Music Performance, Piano Track Requirements: 124-127 Credit Hours
Music Performance, Piano Track - Subtrack in Accompanying/Coaching Requirements: 126-129 Credit Hours
Music Performance, Vocal Track Requirements: 123-129 Credit Hours
Music Theatre Concentration Requirements: 123-125 Credit Hours

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within the major.

² In addition to the School of Music requirements outlined below, students seeking a concentration in music education must meet all the criteria for admission to the teacher education program and complete the professional education sequence for teaching licensure.

Major Requirements

Incoming Music Major Assessment Milestone Credits: 0.00
MUS 143. Aural Skills I **Credits: 1.00**
MUS 144. Aural Skills II **Credits: 1.00**
MUS 195. Recital Attendance **Credits: 0.00** (six semesters)
MUS 206. Introduction to Global Music [C2VPA] **Credits: 3.00 ¹**
MUS 207. History of Western Music **Credits: 3.00**
MUS 208. Repertoire Lab for History of Western Music **Credits: 1.00**
MUS 243. Aural Skills III **Credits: 1.00**
MUS 244. Aural Skills IV **Credits: 1.00**
MUS 317. Basic Conducting **Credits: 2.00**
MUS 380. Musicological Perspectives **Credits: 3.00**
MUS 381. Music Research Lab **Credits: 1.00**

School of Music Senior Assessment Milestone Credits: 0.00

Choose one of the following: 1 Credit Hour

MUS 101. Keyboard Skills II **Credits: 1.00** (required for music industry students and prerequisite for MUS 202-MUS 303)
MUS 303. Keyboard Skills IV **Credits: 1.00** (all music students except music industry, jazz studies, and music education jazz subtrack; must be passed prior to student teaching)
MUS 305. Jazz Keyboard Skills **Credits: 1.00** (*students in the B.M. Jazz Studies and Music Education Instrumental Jazz subtrack concentrations enroll in MUS 305 instead of MUS 303*)

Written Music Theory Path One: 6 Credit Hours

Choose this path if you have passed the music theory diagnostic exam. None of the courses in this section may be repeated for credit.
MUS 241. Diatonic and Chromatic Harmony **Credits: 3.00**
MUS 252. Analysis of Music 1900-1950 **Credits: 3.00**
or
MUS 253. Analysis of Music 1950-Present **Credits: 3.00**

Choose two of the following courses: 6 Credit Hours

None of the courses in this section may be repeated for credit.
MUS 250. Form and Analysis: Baroque and Classical **Credits: 3.00**
MUS 251. Form and Analysis: Romantic **Credits: 3.00**
MUS 252. Analysis of Music 1900-1950 **Credits: 3.00**
MUS 253. Analysis of Music 1950-Present **Credits: 3.00**
MUS 254. Form and Analysis: Popular Music **Credits: 3.00**
MUS 255. Jazz Theory **Credits: 3.00** (*Students concentrating in Jazz or Music Education Jazz Subtrack must take MUS 255*).
MUS 256. Contrapuntal Techniques **Credits: 3.00**

Path One Total: 12 Credit Hours

Written Music Theory Path Two: 9 Credit Hours

Choose this path if you have not successfully passed the music theory diagnostic exam. None of the courses in this section may be repeated for credit.

MUS 141. Foundations of Music Theory **Credits: 3.00**

MUS 241. Diatonic and Chromatic Harmony **Credits: 3.00**

MUS 252. Analysis of Music 1900-1950 **Credits: 3.00**

or

MUS 253. Analysis of Music 1950-Present **Credits: 3.00**

Choose one of the following: 3 Credit Hours

None of the courses in this section may be repeated for credit.

MUS 250. Form and Analysis: Baroque and Classical **Credits: 3.00**

MUS 251. Form and Analysis: Romantic **Credits: 3.00**

MUS 252. Analysis of Music 1900-1950 **Credits: 3.00**

MUS 253. Analysis of Music 1950-Present **Credits: 3.00**

MUS 254. Form and Analysis: Popular Music **Credits: 3.00**

MUS 255. Jazz Theory **Credits: 3.00** (*Students concentrating in Jazz or Music Education Jazz Subtrack must take MUS 255*).

MUS 256. Contrapuntal Techniques **Credits: 3.00**

Path Two Total: 12 Credit Hours

Total: 30 Credit Hours

Footnote

¹ MUS 206 will count for the Music Core and also for the General Education, Cluster Two, Part 2 if desired. There will be a specific music major section of MUS 206 offered once each academic year.

Additional Information

For a recommended eight-semester outline of curricular requirements for each concentration, see the School of Music's Undergraduate Music Student Handbook.

Jazz Studies Concentration

Coordinator: Dr. Charles Dotas

Phone: (540) 568-6180

Jazz Studies Requirements: 39 Credit Hours

Admission to the Jazz Studies concentration by successful completion of a jazz performance audition no sooner than the end of the first year as an approved music major.

MUS 345. Small Ensemble Jazz Arranging **Credits: 3.00**

MUS 346. Large Ensemble Jazz Arranging **Credits: 3.00**

MUS 356. History of Jazz in America **Credits: 3.00**

MUS 395. Junior or Senior Half Recital **Credits: 0.00** (*presented at the end of the junior year, jazz repertoire*)

MUS 440. Jazz Improvisation Laboratory II **Credits: 2.00** (*taken for four semesters for a total of 8.00 credit hours*)

MUS 473. Jazz Ensemble Procedures and Techniques **Credits: 2.00**

MUS 495. Senior Graduation Recital **Credits: 1.00**

MUAP 355. Jazz Chamber Ensemble **Credits: 1.00** (*taken for six semesters for a total of 6.00 credit hours in addition to the assigned ensemble requirement*)

Ensembles (one assigned ensemble each semester) ¹ **Credits: 8.00**

Approved jazz electives ² **Credits: 5.00**

Applied Music Lesson in Primary Instrument: 8 Credit Hours

Applied music study (primary instrument), Level 1-4. Jazz Studies students enroll in 2 credits in the primary instrument for 4 semesters in the first two years for a total of 8.00 credit hours. Students accepted into Jazz Studies program may continue applied music study (in addition to applied jazz study) with consent of primary applied instructor.

MUAP 300. Applied Music Lesson (Undergraduate) **Credits: 1.00 - 3.00** (*taken at two credit hours for four semesters for a total of 8.00 credit hours*)

Applied Music Lesson in Jazz: 12 Credit Hours

Applied music study (Jazz). Two credits of Applied Jazz Study, Level 5-8, for 6 semesters for a total of 12.00 credit hours; may be taken concurrently with applied music study in the primary instrument. The student must be enrolled in Applied Jazz Study during the semesters of the Half Recital MUS 395 and the Graduation Recital MUS 495.

MUAP 300. Applied Music Lesson (Undergraduate) **Credits: 1.00 - 3.00** (*taken at two credit hours for six semesters for a total of 12.00 credit hours*)

Total: 59 Credit Hours

Footnotes

¹ Prior to acceptance into Jazz Studies program, ensemble placement determined by primary instrument applied faculty and Ensemble Committee. Students accepted into the Jazz Studies program must enroll in MUAP 347 (or MUAP 348 with jazz studies coordinator permission) each semester until graduation. Students in the Jazz Studies program are encouraged to continue participation in additional School of Music ensembles.

² Approved electives include: MUS 446, MUS 480 and MUS 485.

Music Composition Concentration

Coordinator: Dr. Jason Haney

Phone: (540) 568-6664

Music Composition Requirements

Additional requirements: Admission to this concentration by approval of theory/composition faculty. Students should take both MUS 252 and MUS 253 from the theory menu.

MUS 256. Contrapuntal Techniques **Credits: 3.00** ¹

MUS 352. Music Composition **Credits: 2.00 - 3.00** (*MUS 352 is repeatable for a total of 16.00 credit hours*)

MUS 435. Instrumentation **Credits: 3.00**

MUS 445. Orchestration **Credits: 3.00**
 MUS 450. Topics in Music Analysis **Credits: 3.00**
 MUS 480. Advanced Seminar in Musicological Topics **Credits: 3.00**
 or
 MUS 485. Advanced Jazz Topics Seminar **Credits: 3.00**
 MUS 495. Senior Graduation Recital **Credits: 1.00**
 Applied major study **Credits: 12.00**
 Ensembles (one assigned ensemble each semester) ² **Credits: 8.00**
 Approved music electives ³ **Credits: 3.00**

Total: 55 Credit Hours

Footnotes

¹ MUS 256 must be taken in addition to the 4 courses required as part of the music theory core.

² Various ensembles approved by adviser.

³ Approved music electives may not be fulfilled by additional ensemble credits.

Music Education Concentration

Coordinator: Dr. Lisa Maynard
Phone: (540) 568-6465

The Music Education program is designed primarily for those preparing to teach vocal or instrumental music in public schools. In addition to the School of Music requirements outlined below, students seeking a degree in music education must meet all the criteria for admission to the teacher education program and complete the professional education sequence for teaching licensure.

Endorsement in Both Vocal and Instrumental Music

Students desiring licensure in both instrumental and vocal music should consult the coordinator of music education to plan their programs.

Teaching Licensure Requirements

Students who want to pursue the music education program must earn acceptance into the teaching licensure program offered by the College of Education.

Music Education General Education Requirements

Music Education students must take 38-41 credit hours of General Education courses. PSYC 160 may double count as a Cluster Five course in General Education.

Professional Education Sequence Requirements

EDUC 200. Foundations of Education in the United States **Credits: 3.00** ¹
 LED 420. Content Area Literacy, K-12 **Credits: 2.00**
 MUED 480. Student Teaching **Credits: 6.00-12.00** (senior year) (MUED 480 must be taken for a total of 12.00 credits)

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00** ¹

Total: 20 Credit Hours

Footnote

¹ Minimum grade of "C" required in EDUC 200, PSYC 160 and WRTC 103.

Music Education, Instrumental Track

(Applied study in winds, strings, percussion, piano)

Students whose primary instrument is piano must pass an interview with music education faculty, an audition on a band or orchestra instrument, and participate in instrumental ensembles each semester except for two during which they must elect MUAP 357. Performance in these ensembles will be on the secondary instrument with one semester on piano permitted as ensemble needs dictate.

Music Education, Instrumental Track Requirements: 32 Credit Hours

MUED 200. Small Ensemble for Instrumental Music Education **Credits: 0.00**
 MUED 271. Music Education: A Professional Choice **Credits: 1.00**
 MUED 273. Music Education: Professional Practice **Credits: 1.00**
 MUED 310. Vocal Techniques **Credits: 1.00**
 MUED 371. Beginning Methods and Materials for Instrumental Music **Credits: 2.00**
 MUED 373. Advanced Methods and Materials for Instrumental Music **Credits: 2.00**
 MUS 150. Introduction to Technological Applications in Music **Credits: 1.00**
 MUS 319. Intermediate Instrumental Conducting **Credits: 2.00**
 MUS 395. Junior or Senior Half Recital **Credits: 0.00**
 MUS 442. Instrumental Arranging **Credits: 2.00**
 Applied music study (primary instrument) **Credits: 13.00**
 Ensembles (one assigned ensemble each semester for seven semesters) ¹
² **Credits: 7.00**

Instrumental Techniques Classes: 5 Credit Hours

MUED 301. Woodwind Techniques **Credits: 1.00**
 MUED 303. Brass Techniques **Credits: 1.00**
 MUED 305. Percussion Techniques **Credits: 1.00**
 MUED 307. String Techniques **Credits: 1.00**
 MUED 311. Ensemble Techniques **Credits: 1.00**

Choose one of the following: 2 Credit Hours

MUED 470. Marching Band Procedures **Credits: 2.00**
 MUED 472. Survey of String Orchestra Repertoire **Credits: 2.00**
 MUED 474. Guitar Pedagogy and Classroom Methods **Credits: 2.00**

Total: 39 Credit Hours

Footnotes

¹ Wind and percussion students are required to participate in marching band for a minimum of two years, but participation every year is recommended.

² Students whose primary instrument is piano must pass an interview with music education faculty, an audition on a band or orchestra instrument, and participate in instrumental ensembles each semester except for two during which they must elect MUAP 357.

Additional Information

Performance in these ensembles will be on the secondary instrument with one semester on piano permitted as ensemble needs dictate.

Music Education, Instrumental Track, Subtrack in Jazz

(Applied study in winds, strings, percussion, piano, guitar)

Students whose primary instrument is piano must pass an interview with music education faculty, an audition on a band or orchestra instrument, and participate in three semesters of MUAP 347 or MUAP 348, and four semesters of a non-jazz instrumental ensemble except for two during which they must elect MUAP 357. Performance in Jazz Ensemble or Jazz Band will be on piano; performance in non-jazz ensembles will be on the secondary instrument with one semester on piano permitted as ensemble needs dictate. Students whose primary instrument is guitar must pass an interview with music education faculty, an audition on a band or orchestra instrument, and participate in three semesters of MUAP 347 or MUAP 348, and four semesters of a non-jazz instrumental ensemble except for two during which they must elect MUAP 353. Performance in Jazz Ensemble or Jazz Band will be on guitar; performance in non-jazz ensembles will be on the secondary instrument with one semester permitted on guitar as ensemble needs dictate.

Degree Requirements for the Music Education, Instrumental Track, Subtrack in Jazz

Conditional admission to the Subtrack in Jazz by successful completion of jazz performance audition no sooner than the end of the first year; full admission to the Subtrack in Jazz upon completion of Sophomore Music Education Interview.

Four semesters of traditional applied music studio study, to include a Capstone Performance Project (Area Recital, Double Jury, or other public performance approved by the applied instructor), followed by three semesters of applied jazz study, to include a senior half recital comprising jazz repertoire.

Music Education, Instrumental Track, Subtrack in Jazz Requirements: 35 Credit Hours

MUED 200. Small Ensemble for Instrumental Music Education **Credits: 0.00**

MUED 271. Music Education: A Professional Choice **Credits: 1.00**

MUED 273. Music Education: Professional Practice **Credits: 1.00**

MUED 310. Vocal Techniques **Credits: 1.00**

MUED 371. Beginning Methods and Materials for Instrumental Music **Credits: 2.00**

MUED 373. Advanced Methods and Materials for Instrumental Music **Credits: 2.00**

MUS 150. Introduction to Technological Applications in Music **Credits: 1.00**

MUS 319. Intermediate Instrumental Conducting **Credits: 2.00**

MUS 345. Small Ensemble Jazz Arranging **Credits: 3.00** ¹

MUS 395. Junior or Senior Half Recital **Credits: 0.00** ²

MUS 473. Jazz Ensemble Procedures and Techniques **Credits: 2.00**

Applied music study (primary instrument) **Credits: 13.00**

Ensembles (one assigned ensemble each semester for seven semesters) ^{3, 4, 5,}

⁶ **Credits: 7.00**

Instrumental Techniques Classes: 5 Credit Hours

Take all five classes:

MUED 301. Woodwind Techniques **Credits: 1.00**

MUED 303. Brass Techniques **Credits: 1.00**

MUED 305. Percussion Techniques **Credits: 1.00**

MUED 307. String Techniques **Credits: 1.00**

MUED 311. Ensemble Techniques **Credits: 1.00**

Choose one of the following: 2 Credit Hours

MUED 470. Marching Band Procedures **Credits: 2.00**

MUED 472. Survey of String Orchestra Repertoire **Credits: 2.00**

MUED 474. Guitar Pedagogy and Classroom Methods **Credits: 2.00**

Total: 42 Credit Hours

Footnotes

¹ MUS 346 may be substituted if student teaching occurs during the fall semester.

² Half recital to comprise jazz repertoire.

³ Students in the Jazz Subtrack are required to participate in four semesters of an assigned traditional wind or string ensemble, and three semesters of one assigned jazz ensemble (MUAP 347 or MUAP 348). Students must participate in at least one assigned ensemble each semester for seven semesters.

⁴ Students are required to participate in marching band for a minimum of one year. Piano and guitar students will perform on the secondary instrument.

⁵ One semester of MUAP 355 is required in lieu of the second year of marching band.

⁶ Students whose primary instrument is piano must pass an interview with music education faculty, an audition on a band or orchestra instrument, and participate in three semesters of MUAP 347 or MUAP 348, and four semesters of a non-jazz instrumental ensemble except for two during which they must elect MUAP 357. Performance in Jazz Ensemble or Jazz Band will be on piano; performance in non-jazz ensembles will be on the secondary instrument with one semester on piano permitted as ensemble needs dictate. Students whose primary instrument is guitar must pass an interview with music education faculty, an audition on a band or orchestra instrument, and participate in three semesters of MUAP 347 or MUAP 348, and four semesters of a non-jazz instrumental ensemble except for two during which they must elect MUAP 353. Performance in Jazz Ensemble or Jazz Band will be on guitar; performance in non-jazz ensembles will be on the secondary instrument with one semester permitted on guitar as ensemble needs dictate.

Additional Information

Performance in these ensembles will be on the secondary instrument with one semester on piano permitted as ensemble needs dictate.

Music Education, Vocal Track

(Applied study in voice or piano)

Music Education, Vocal Track Requirements

MUED 201. Small Ensemble for Vocal Music Education **Credits: 0.00**
MUED 206. Instrumental Music Methods for Vocal Music Education **Credits: 1.00**
MUED 271. Music Education: A Professional Choice **Credits: 1.00**
MUED 273. Music Education: Professional Practice **Credits: 1.00**
MUED 372. General Music Practices **Credits: 2.00**
MUED 376. Choral Music Materials and Techniques **Credits: 2.00**
MUED 380. Music in the Elem School **Credits: 2.00**
MUED 471. School Musical, Jazz and Show Choir Procedures **Credits: 2.00**
MUS 120. Diction for Singers **Credits: 1.00**
MUS 121. Diction for Singers II **Credits: 1.00**
MUS 150. Introduction to Technological Applications in Music **Credits: 1.00**
MUS 318. Intermediate Choral Conducting **Credits: 2.00**
MUS 395. Junior or Senior Half Recital **Credits: 0.00**
MUS 441. Vocal Arranging **Credits: 2.00**
MUS 477. Vocal Pedagogy **Credits: 2.00**
Applied major study (voice or keyboard) **Credits: 12.00**
Applied secondary area (MUAP 205 for piano majors; MUS 404 (1.00 credit hour) for voice majors) ¹ **Credits: 1.00 - 2.00**
Ensembles (one assigned ensemble each semester for seven semesters) ² **Credits: 7.00**

Total: 40-41 Credit Hours

Footnotes

¹ Vocal track students must pass the Advanced Keyboard Skills exam.

² Piano track students may elect MUAP 357 for two semesters.

Music Industry Emphasis

Coordinator: David Cottrell

Phone: (540) 568-6303

Music Industry Emphasis Requirements

ACTG 244. Accounting for Non-Business Majors **Credits: 3.00**
MGT 305. Organizational Behavior and Human Resource Management **Credits: 3.00**
MKTG 380. Principles of Marketing **Credits: 3.00**
MUI 221. Survey of Music Industry **Credits: 3.00**
MUI 230. Music Industry Gateway **Credits: 0.00**
MUI 231. Legal Aspects of Music Industry **Credits: 3.00**
MUI 440. Entrepreneurship in Music Industry **Credits: 3.00**
MUI 492. Internship in Music Industry **Credits: 3.00 - 6.00**
MUS 395. Junior or Senior Half Recital **Credits: 0.00**
Applied major study **Credits: 14.00**
Ensembles (one assigned ensemble each semester for seven semesters) **Credits: 7.00**
Music industry electives **Credits: 12.00**
Approved music electives ¹ **Credits: 3.00**

Total: 57 Credit Hours

Footnote

¹ Approved music electives may not be fulfilled by additional ensemble credits.

Music Performance

Music Performance, Instrumental Track

Co-coordinators: Beth Chandler Cahill, Carl Donakowski and Chris Carrillo

Phone: (540) 568-6197

Music Performance, Instrumental Track Requirements: 52 Credit Hours

Additional requirements: Admission to this concentration by successful completion of performance audition, no sooner than end of first year as approved music major.

MUS 319. Intermediate Instrumental Conducting **Credits: 2.00**

MUS 395. Junior or Senior Half Recital **Credits: 0.00**

MUS 472. Instrumental Pedagogy **Credits: 1.00** ¹

Choose one 3-credit seminar:

MUS 450. Topics in Music Analysis **Credits: 3.00**

or

MUS 480. Advanced Seminar in Musicological Topics **Credits: 3.00**

or

MUS 485. Advanced Jazz Topics Seminar **Credits: 3.00**

MUS 495. Senior Graduation Recital **Credits: 1.00**

Applied music courses (primary instrument) **Credits: 22.00**

Chamber ensembles (in addition to the eight-semester major assigned ensemble requirement) **Credits: 6.00**

Ensembles (one assigned ensemble each semester) **Credits: 8.00**

Advanced music literature or seminar elective **Credits: 3.00**

Approved music electives ² **Credits: 3.00**

Music Theory Elective: 3 Credit Hours

Choose one of the following courses that has not previously been taken.

MUS 250. Form and Analysis: Baroque and Classical **Credits: 3.00**

MUS 251. Form and Analysis: Romantic **Credits: 3.00**

MUS 252. Analysis of Music 1900-1950 **Credits: 3.00**

MUS 253. Analysis of Music 1950-Present **Credits: 3.00**

MUS 254. Form and Analysis: Popular Music **Credits: 3.00**

MUS 255. Jazz Theory **Credits: 3.00**

MUS 256. Contrapuntal Techniques **Credits: 3.00**

Total: 55 Credit Hours

Footnotes

¹ MUS 450, MUS 480, or MUS 485 also fulfill the requirement for an advanced music literature elective or the approved music electives.

² Approved music electives may not be fulfilled by additional ensemble credits. A maximum of two credits may be counted in secondary applied music study.

Music Performance, Piano Track

Coordinator: Dr. Lori Piitz
Phone: (540) 568-6646

Music Performance, Piano Track Requirements: 50 Credit Hours

Additional requirements: Admission to this concentration by successful completion of performance audition, no sooner than end of first year as approved music major.

MUS 371. Private Piano Pedagogy **Credits: 2.00**
MUS 395. Junior or Senior Half Recital **Credits: 0.00**
MUS 420. Piano Technology I **Credits: 1.00**
MUS 421. Piano Technology II **Credits: 1.00**
MUS 450. Topics in Music Analysis **Credits: 3.00** ¹
MUS 460. Piano Literature I **Credits: 2.00**
MUS 470. Piano Literature II **Credits: 2.00**
MUS 471. Piano Literature III **Credits: 2.00**
MUS 495. Senior Graduation Recital **Credits: 1.00**
Applied piano study **Credits: 22.00**
Ensembles (one assigned ensemble each semester) **Credits: 8.00**
Approved music electives ² **Credits: 6.00**

Choose one 3-credit Seminar: 3 Credit Hours

MUS 450. Topics in Music Analysis **Credits: 3.00** ¹
or
MUS 480. Advanced Seminar in Musicological Topics **Credits: 3.00**
or
MUS 485. Advanced Jazz Topics Seminar **Credits: 3.00**

Music theory elective. Choose one of the following: 3 Credit Hours

The chosen course should be one not taken to fulfill the music theory core requirements.³

MUS 250. Form and Analysis: Baroque and Classical **Credits: 3.00**
MUS 251. Form and Analysis: Romantic **Credits: 3.00**
MUS 252. Analysis of Music 1900-1950 **Credits: 3.00**
MUS 253. Analysis of Music 1950-Present **Credits: 3.00**
MUS 254. Form and Analysis: Popular Music **Credits: 3.00**
MUS 256. Contrapuntal Techniques **Credits: 3.00**

Total: 56 Credit Hours

Footnotes

¹ If choosing a second iteration of MUS 450 in this category, the semester and seminar topic must be different than the first required MUS 450.

² Approved music electives may not be fulfilled by additional ensemble credits.

³ Course may not have already been taken as part of the music theory core curriculum. In other words, piano performance students should be selecting a fifth course from the music theory menu of options.

Music Performance, Piano Track - Subtrack in Accompanying/Coaching

Coordinator: Dr. Gabriel Dobner
Phone: (540) 568-6002

Music Performance, Piano Track - Subtrack in Accompanying/Coaching Requirements: 49 Credit Hours

MUS 120. Diction for Singers **Credits: 1.00**
MUS 121. Diction for Singers II **Credits: 1.00**
MUS 371. Private Piano Pedagogy **Credits: 2.00**
MUS 395. Junior or Senior Half Recital **Credits: 0.00**
MUS 467. Song Literature **Credits: 3.00**
MUS 470. Piano Literature II **Credits: 2.00**
MUS 495. Senior Graduation Recital **Credits: 1.00**
Applied piano accompanying **Credits: 9.00**
Applied piano study **Credits: 13.00**
Applied voice study **Credits: 2.00**
Approved music electives ¹ **Credits: 6.00**
Ensembles (*one assigned ensemble each semester*) **Credits: 8.00**

Choose one of the following: 4 Credit Hours

FR 101. Elementary French I **Credits: 3.00 - 4.00**
GER 101. Elementary German I **Credits: 3.00 - 4.00**
ITAL 101. Elementary Italian I **Credits: 3.00 - 4.00**

Choose one of the following: 2 Credit Hours

MUS 318. Intermediate Choral Conducting **Credits: 2.00**
MUS 319. Intermediate Instrumental Conducting **Credits: 2.00**

Music theory elective. Choose one of the following: 3 Credit Hours

The chosen course should be one not taken to fulfill the music theory core requirements.

MUS 250. Form and Analysis: Baroque and Classical **Credits: 3.00**
MUS 251. Form and Analysis: Romantic **Credits: 3.00**
MUS 252. Analysis of Music 1900-1950 **Credits: 3.00**
MUS 253. Analysis of Music 1950-Present **Credits: 3.00**
MUS 254. Form and Analysis: Popular Music **Credits: 3.00**
MUS 256. Contrapuntal Techniques **Credits: 3.00**

Total: 58 Credit Hours

Footnote

¹ Approved music electives may not be fulfilled by additional ensemble credits.

Music Performance, Vocal Track

Coordinator: Dr. Jo-Anne van der Vat-Chromy

Phone: (540) 568-5803

The Music Performance, Vocal Track requires 41 General Education courses. The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary. Students in this track are required to complete MUS 467, which will count in Cluster Two, Part 3, of General Education.

Music Performance, Vocal Track Requirements: 39 Credit Hours

Additional requirements: Admission to this concentration by successful completion of performance audition, no sooner than end of first year as approved music major.

MUS 120. Diction for Singers **Credits: 1.00**

MUS 121. Diction for Singers II **Credits: 1.00**

MUS 318. Intermediate Choral Conducting **Credits: 2.00**

MUS 395. Junior or Senior Half Recital **Credits: 0.00**

MUS 404. Advanced Keyboard Skills **Credits: 1.00**

MUS 465. Opera History and Literature **Credits: 3.00**

MUS 467. Song Literature **Credits: 3.00**

MUS 477. Vocal Pedagogy **Credits: 2.00**

MUS 495. Senior Graduation Recital **Credits: 1.00**

Applied voice study **Credits: 16.00**

Ensembles (one assigned ensemble each semester) ¹ **Credits: 8.00**

Music Elective **Credit: 1.00**

Music Theory Elective: 3 Credit Hours

Choose one of the following courses that has not previously been taken.

MUS 250. Form and Analysis: Baroque and Classical **Credits: 3.00**

MUS 251. Form and Analysis: Romantic **Credits: 3.00**

MUS 252. Analysis of Music 1900-1950 **Credits: 3.00**

MUS 253. Analysis of Music 1950-Present **Credits: 3.00**

MUS 254. Form and Analysis: Popular Music **Credits: 3.00**

MUS 256. Contrapuntal Techniques **Credits: 3.00**

Choose two of the following: 16 Credit Hours

FR 101. Elementary French I **Credits: 3.00 - 4.00 and**

FR 102. Elementary French II **Credits: 3.00 - 4.00**

GER 101. Elementary German I **Credits: 3.00 - 4.00 and**

GER 102. Elementary German II **Credits: 3.00 - 4.00**

ITAL 101. Elementary Italian I **Credits: 3.00 - 4.00 and**

ITAL 102. Elementary Italian II **Credits: 3.00 - 4.00**

Total: 58 Credit Hours

Footnote

¹ Students in the Bachelor of Music in Performance with a specialization in Performance - Vocal Track must participate in MUAP 343 in an on-stage capacity for at least two semesters. They may elect to fill the ensemble requirement in their remaining semesters by taking any of the credited vocal ensembles of the school: Men's or Women's Chorus, Treble Chamber Choir, Chorale, Madison Singers, or Opera Theatre. A minimum of one credit of ensemble must be selected each semester.

Music Theatre Concentration

Director of Opera and Music Theatre: Dr. Jo-Anne van der Vat-Chromy

Phone: (540) 568-5803

Music Theatre Requirements: 42 Credit Hours

Additional requirements: Admission to this concentration by successful completion of performance audition, no sooner than end of first year as approved music major.

MUI 221. Survey of Music Industry **Credits: 3.00**

MUS 120. Diction for Singers **Credits: 1.00**

MUS 121. Diction for Singers II **Credits: 1.00**

MUS 357. Music Theatre History and Analysis **Credits: 3.00**

or

THEA 357. Music Theatre History and Analysis **Credits: 3.00**

MUS 395. Junior or Senior Half Recital **Credits: 0.00**

MUS 465. Opera History and Literature **Credits: 3.00**

THEA 251. Acting I: Basic Acting **Credits: 3.00**

THEA 353. Music Theatre Performance **Credits: 2.00**

Applied voice study **Credits: 16.00**

Approved music, theatre or dance electives ¹ **Credits: 2.00**

Ensembles (one assigned ensemble each semester, as listed below) ² **Credits: 8.00**

Choose one of the following: 3 Credit Hours

STAD 171. Performance Production **Credits: 3.00**

THEA 273. Design Aspects of Performance **Credits: 3.00**

Choose one of the following courses: 2-3 Credit Hours

THEA 261. Voice for the Stage **Credits: 3.00**

THEA 303. Topics in Theater **Credits: 1.00 - 3.00**

THEA 351. Acting II: Intermediate Acting **Credits: 3.00**

THEA 454. Advanced Music Theatre Performance **Credits: 2.00**

Choose two of the following: 4-5 Credit Hours

DANC 245. Dance Improvisation (0, 4) **Credits: 2.00**

MUS 343. Basic Movement and Acting Skills for the Opera Stage **Credits: 2.00**

THEA 281. Movement for the Actor **Credits: 3.00**

Choose two dance classes of appropriate level from modern, ballet, ballroom, jazz or tap: 4 Credit Hours

DANC 140. Elementary Modern Dance (0, 4) **Credits: 2.00**
 DANC 142. Elementary Ballet (0, 4) **Credits: 2.00**
 DANC 144. Ballroom Dance (0, 4) **Credits: 2.00**
 DANC 146. Jazz Dance (0, 4) **Credits: 2.00**
 DANC 147. Tap Dance (0, 4) **Credits: 2.00**
 DANC 247. Intermediate Tap **Credits: 2.00**
 DANC 440. Advanced Modern Dance (0, 4) **Credits: 2.00**
 DANC 442. Advanced Ballet (0, 4) **Credits: 2.00**
 DANC 446. Advanced Jazz **Credits: 2.00**

Total: 55 Credit Hours

Footnotes

¹ Approved music electives may not be fulfilled by additional ensemble credits.

² Students in the Bachelor of Music, Music Theatre Emphasis must participate in MUAP 343, in an on-stage capacity for at least two semesters. They may elect to fill the ensemble requirement in their remaining semesters by taking any of the credited vocal ensembles of the school – Men's or Women's Chorus; Treble Chamber Choir; Chorale; Madison Singers; Opera Theatre. A minimum of one credit of ensemble must be selected each semester.

Major, Concentration and Electives Total: 54–62 Credit Hours

Recommended Schedule for First Year Majors

The first year of study shares a common curriculum for all concentrations. The year is devoted to courses from the basic music core requirements, General Education courses, ensemble participation and applied study in the primary applied area.

First Year

First Semester

MUS 141. Foundations of Music Theory **Credits: 3.00**
 or
 MUS 241. Diatonic and Chromatic Harmony **Credits: 3.00**
 MUS 143. Aural Skills I **Credits: 1.00**
 MUS 195. Recital Attendance **Credits: 0.00**
 WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**
 Applied music major course **Credits: 2.00**
 Music ensemble course **Credits: 1.00 - 2.00**
 General Education courses (from Cluster One) **Credits: 3.00**

Choose one of the following (According to placement decision): 1 Credit Hour

MUS 100. Keyboard Skills **Credits: 1.00**
 MUS 101. Keyboard Skills II **Credits: 1.00**
 MUS 202. Keyboard Skills III **Credits: 1.00**
 MUS 303. Keyboard Skills IV **Credits: 1.00**

MUS 305. Jazz Keyboard Skills **Credits: 1.00** (*MUS 305 is required for jazz studies students and music education jazz subtrack students*)

Total: 14–15 Credit Hours

Second Semester

MUS 144. Aural Skills II **Credits: 1.00**
 MUS 195. Recital Attendance **Credits: 0.00**
 Applied music major course **Credits: 2.00**
 Music ensemble course **Credits: 1.00 - 2.00**
 General Education courses (*MUS 206 and final courses from Cluster One*) **Credits: 9.00**

Choose one of the following: 1 Credit Hour

MUS 101. Keyboard Skills II **Credits: 1.00**
 MUS 202. Keyboard Skills III **Credits: 1.00**
 MUS 303. Keyboard Skills IV **Credits: 1.00**
 MUS 305. Jazz Keyboard Skills **Credits: 1.00** (*required for jazz studies students and music education jazz subtrack students*)

Total: 14–15 Credit Hours

Program Total: 123–133 Credit Hours

School of Nursing

Melody Eaton, **Director**
 Jamie Robinson, **Associate Director, Undergraduate Programs**
 Andrea Knopp, **Associate Director, Graduate Programs**

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Assistant Professors

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Lecturers

C. Atkinson, S. Beckler, L. Carmines, T. Smith, R. Thomas, T. Whelden

Mission

We engage students, faculty and communities through dynamic and innovative nursing education, practice and scholarship to influence health in our world.

Vision

To be a SON nationally recognized for academic excellence and innovative contributions to health care.

Values

We are committed to:

Integrity: being honest, sincere and just in all of our endeavors

Caring: sharing compassion, kindness and authenticity with those we encounter

Excellence: pursuing the highest quality in teaching, learning, scholarship and service

Collaboration: cultivating partnerships built on respect, trust and commitment

Advocacy: providing a voice for those we serve and promoting policies that improve healthcare for all

Inclusivity: honoring the richness that diverse perspectives bring to our world

Resilience: achieving inner strength and wisdom by adapting to life's challenges

Career Opportunities and Marketable Skills

- Preparation as a professional nurse leading to a Bachelor of Science in Nursing (B.S.N.) degree.
- Eligibility to take the **National Certification and Licensure** (NCLEX) Exam to become a registered nurse (R.N.).
- Preparation for entry-level positions in a wide range of health care settings.
- Upon completion of the R.N. – B.S.N. program of study, students may be eligible for leadership positions in a wide range of health care settings.
- Preparation for graduate study in nursing.

Co-curricular Activities and Organizations

- **JMU Chapter of the Virginia Nursing Student Association**
- Omega Zeta of Sigma Theta Tau International Nursing Honor Society
- B.S.N. Student Advisory Council
- Nursing Students without Borders
- Virginia Student Nurses Association

Accreditation

The traditional Bachelor of Science in Nursing program is approved by the Virginia Board of Nursing. The baccalaureate and master's programs at James Madison University are accredited by the **Commission on Collegiate Nursing Education**, 655 K Street, NW, Suite 750, Washington, DC 20001, (202) 463-6930.

Program Options

The School of Nursing offers two baccalaureate program options. The B.S.N. program prepares traditional undergraduate students to practice as an entry-level professional nurse. The R.N. to B.S.N. program is a degree completion

program that provides flexible learning opportunities for licensed R.N.s who have an associate degree or diploma to complete the baccalaureate degree.

Admission and Retention Requirements

Information on admission to programs within the School of Nursing, retention and minimum grade requirements may be found on the individual program pages: Nursing, B.S.N. and Nursing, R.N. to B.S.N.

Special Expenses

A differential tuition of \$90 per credit hour is added to the standard charge for courses carrying the NSG prefix. This charge applies to all students, both in-state and out-of-state, at the undergraduate and graduate levels, with exception of students enrolled in the R.N. to B.S.N. program.

Nursing, B.S.N.

Program Description

The traditional Bachelor of Science in Nursing (B.S.N.) program prepares students for licensure as entry-level professional nurses. The General Education program engages students in the liberal arts, promotes community and civic engagement, and develops students' abilities to use ethical reasoning in decision-making. The B.S.N. program builds on the liberal arts to develop discipline-specific knowledge, skills and abilities needed to promote health, prevent disease, manage acute and chronic conditions, and coordinate care to individuals, families, and communities across the lifespan in a variety of healthcare and community settings.

Admission and Retention Requirements

Traditional B.S.N. Program

Admission to the nursing program is limited and competitive. Each semester 113 students are admitted into junior level nursing courses. All students, including transfer students, must complete the B.S.N. admission application after receiving admission to the university. B.S.N. admission application information is available on the nursing school website.

A fully completed B.S.N. admission application must be received by December 1 to be considered for the following fall semester and by July 1 to be considered for following spring semester. Students not admitted to the program must reapply to be considered in the applicant pool for the following admission cycle.

Application Requirements: For admission to the program beginning in Fall 2024 (students who enter as first years in Fall 2023), the following must be completed by the end of fall semester of the sophomore year. For spring admission, the following must be completed by the end of spring semester of the sophomore year.

The following are required to apply for admission to the B.S.N. program:

- Enrolled at JMU
- B.S.N. declared major
- One full-time semester at JMU completed
- 36 credit hours completed

- Earn a minimum grade of "C-" in prerequisite courses and maintain a minimum prerequisite GPA of 3.0
- General Education "Madison Foundations" -- one Critical Thinking and one Human Communication course*
- One of the two biology course sequences: BIO 270/BIO 270L Human Physiology** or BIO 290/BIO 290L Human Anatomy
- PSYC 160 Life Span Human Development***
- After the criteria and pre-requisite courses are met the following will be used in applicant consideration:
 - Experiences such as prior military service or veteran status, currently ROTC, current work experiences, and/or current community services
 - Attributes such as Pell grant eligibility, first-generation college student, and/or being multilingual
 - An essay of no more than 250 words to address a prompt that demonstrates students' commitment to the values of the School of Nursing

Admission Requirements

After application and before entry into the B.S.N. program, the remaining prerequisite courses must be completed with a minimum grade of "C-":

- Maintain a minimum prerequisite GPA of 3.00.
 - 48 credit hours completed
 - Earn a minimum grade of "C-" in prerequisite courses:
 - NUTR 280 Nutrition for Wellness
 - MATH 220 Elementary Statistics**
 - CHEM 120 Concepts for Chemistry**
 - BIO 245/BIO 245L General Microbiology
 - Complete remaining biology course: BIO 270/BIO 270L Human Physiology** or BIO 290/BIO 290L Human Anatomy
- *Prerequisite courses included in General Education "Madison Foundations" one Critical Thinking and one Human Communication course

**Prerequisite courses included in General Education "The Natural World"

***Prerequisite courses included in General Education "Sociocultural and Wellness Area"

Students may elect to repeat up to two courses during their enrollment at JMU on a repeat/forgive basis following university policy. For prerequisite courses used in the admission application, specifically biology, chemistry and statistics, when taken at JMU or other institutions as repeat credit, the nursing program will average the grade of the repeated course for a final grade used in the admission application.

The nursing curriculum is a full-time program with courses and clinical during day, evening and night time hours. The associate director for undergraduate programs must approve any deviation from the full-time enrollment pattern as outlined in the catalog. Once admitted to the program, the student must earn a minimum grade of "C-" or "Pass" in each required nursing course to remain in good standing in the nursing program. A grade of "D+/-", "F" or "Fail" is considered a course failure. A student who receives a failing grade in a nursing course may repeat one nursing course, with school approval. A student who receives a second failing grade will be ineligible to continue in the program.

Other academic and related policies in effect for students in the nursing program are outlined on the **school website**.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education courses ¹	41
Nursing courses	61
Other supportive courses	14
Electives	4-8
Total	120

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

General Education and Nursing Prerequisite Requirements

The following are course prerequisites required for the nursing major. Courses must be completed with a minimum grade of "C-."

Prerequisites

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00** ²
 CHEM 120. Concepts of Chemistry [C3PP] **Credits: 3.00** ¹
 MATH 220. Elementary Statistics [C3QR] **Credits: 3.00** ¹

BIO 245. General Microbiology **Credits: 3.00** and
 BIO 245L. General Microbiology Laboratory **Credits: 1.00**

BIO 270. Human Physiology [C3NS] **Credits: 3.00** ¹ and
 BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**

BIO 290. Human Anatomy **Credits: 3.00** and
 BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

NUTR 280. Nutrition for Wellness **Credits: 3.00**

Footnote

¹ Contained in General Education Cluster Three.
² Contained in General Education Cluster Five.

Total: 24 Credit Hours

Major Requirements

Additional information regarding the nursing curriculum can be found on the nursing website.

Required Courses

NSG 350. Foundations of Nursing **Credits: 2.00**

NSG 351. Health Assessment **Credits: 3.00**
 NSG 352. Clinical Applications & Reasoning in Nursing Care I **Credits: 4.00**
 NSG 352L. Clinical Applications & Reasoning in Nursing Care I Clinical **Credits: 2.00**
 NSG 353. Pathophysiology & Pharmacology **Credits: 3.00**
 NSG 354. The Art and Science of Nursing **Credits: 2.00**
 NSG 355. Women's Health **Credits: 3.00**
 NSG 355L. Women's Health Clinical **Credits: 1.00**
 NSG 356. Clinical Applications & Reasoning in Nursing Care II **Credits: 4.00**
 NSG 356L. Clinical Applications & Reasoning in Nursing Care II Clinical **Credits: 2.00**
 NSG 357. Psychiatric Mental Health Nursing **Credits: 3.00**
 NSG 357L. Psychiatric Mental Health Nursing Clinical **Credits: 1.00**
 NSG 450. Nursing Inquiry and Research Methods **Credits: 3.00**
 NSG 451. Child Health **Credits: 3.00**
 NSG 451L. Child Health Clinical **Credits: 1.00**
 NSG 452. Clinical Applications and Reasoning in Nursing Care III **Credits: 4.00**
 NSG 452L. Clinical Applications & Reasoning III Clinical **Credits: 2.00**
 NSG 453. Population-Centered Care in the Community **Credits: 3.00**
 NSG 453L. Population-Centered Care in the Community Clinical **Credits: 2.00**
 NSG 454. Transition to Practice **Credits: 3.00**
 NSG 455. Nursing Informatics **Credits: 3.00**
 NSG 456. Capstone **Credits: 4.00**
 Nursing Electives *2 Credit Hours*

Major Requirements Total: 61 Credit Hours

Additional Information

Students can seek fall or spring admission to the program. Students must complete 36 credit hours before they will be considered for admission to the program.

Cluster One normally is completed during the first year. General Education courses in clusters two, three, four and five can be scheduled as desired by the student across the first and second years.

Most students can complete general education and prerequisite courses in four semesters, but some students find it necessary to enroll in summer school or an additional year to complete the work satisfactorily.

Recommended Schedule for Majors

Junior/Senior Year

Can be taken anytime during junior or senior year.
 Nursing Electives *2 Credit Hours*

First Semester

NSG 350. Foundations of Nursing **Credits: 2.00**
 NSG 351. Health Assessment **Credits: 3.00**
 NSG 352. Clinical Applications & Reasoning in Nursing Care I **Credits: 4.00**
 NSG 352L. Clinical Applications & Reasoning in Nursing Care I Clinical **Credits: 2.00**
 NSG 353. Pathophysiology & Pharmacology **Credits: 4.00**

Total: 15 Credit Hours

Second Semester

NSG 354. The Art and Science of Nursing **Credits: 2.00**
 NSG 355. Women's Health **Credits: 3.00**
 NSG 355L. Women's Health Clinical **Credits: 1.00**
 NSG 356. Clinical Applications & Reasoning in Nursing Care II **Credits: 4.00**
 NSG 356L. Clinical Applications & Reasoning in Nursing Care II Clinical **Credits: 2.00**
 NSG 357. Psychiatric Mental Health Nursing **Credits: 3.00**
 NSG 357L. Psychiatric Mental Health Nursing Clinical **Credits: 1.00**

Total: 16 Credit Hours

Third Semester

NSG 450. Nursing Inquiry and Research Methods **Credits: 3.00**
 NSG 451. Child Health **Credits: 3.00**
 NSG 451L. Child Health Clinical **Credits: 1.00**
 NSG 452. Clinical Applications and Reasoning in Nursing Care III **Credits: 4.00**
 NSG 452L. Clinical Applications & Reasoning III Clinical **Credits: 2.00**

Total: 13 Credit Hours

Fourth Semester

NSG 453. Population-Centered Care in the Community **Credits: 3.00**
 NSG 453L. Population-Centered Care in the Community Clinical **Credits: 2.00**
 NSG 454. Transition to Practice **Credits: 3.00**
 NSG 455. Nursing Informatics **Credits: 3.00**
 NSG 456. Capstone **Credits: 4.00**

Total: 15 Credit Hours

Program Total: 120 Credit Hours

Nursing, R.N. to B.S.N.

Program Description

The R.N. to Bachelor of Science in Nursing (R.N. to B.S.N.) program is a degree-completion program for individuals licensed as a Registered Nurse (R.N.). The R.N. to B.S.N. program builds on the liberal arts and previous nursing education to further develop discipline-specific knowledge, skills and abilities. An emphasis is placed on scholarship and evidence-based practice, clinical decision-making, quality and safety, systems-based practice, and population health. By the end of the program, students are prepared to provide comprehensive nursing care to individuals, families and populations and to take on leadership and management roles to promote quality and safety in healthcare.

Admission and Retention Requirements

R.N. to B.S.N. Program

The R.N. to B.S.N. program is a degree completion program that provides flexible learning opportunities for licensed R.N.'s who have an associate degree or diploma to complete the baccalaureate degree. Classes are offered online to

allow schedule flexibility while completing the B.S.N. degree. The program provides a foundation for professional nursing practice and prepares students for further opportunities such as graduate study and advance practice.

JMU will award R.N. to B.S.N. students up to 37 experiential learning credits for prior learning and practice experience as a R.N. (a minimum of 540 hours), as well as 40 transfer credits toward the General Education requirements for a B.S.N.

Six additional corequisite and thirteen general education credits will be required which may be taken concurrently at a local community college and transferred to JMU for credit. Students will complete 30 credits in the R.N. to B.S.N. program in three semesters of full-time study or five semesters of part-time study, completing a total of 120 semester hours for the baccalaureate degree. Students should apply to the R.N.to B.S.N program to initiate an academic transcript review. Additional program eligibility criteria include:

- Associate Degree or Diploma in Nursing from an accredited college/university.
- Current unrestricted R.N. license in any state, Washington, D.C., or a U.S. possession or territory or an equivalent credential in another country.
- Employment as an R.N. for a minimum of four months and/or plans to practice concurrently with course work.
- Graduates of foreign nursing schools, who are licensed outside of the United States, are required to pass the **Qualifying Exam of the Commission on Graduates of Foreign Nursing Schools** (CGFNS) prior to application and include the exam report with their application materials.
- TOEFL minimum score of 81 (internet-based test) or IELTS minimum score of 6.5 for international applicants.
- Cumulative minimum GPA of 2.5 on a 4-point scale.
- Completion of the General Education courses required for the Bachelor of Science. May be taken concurrently with nursing course work but must be completed prior to graduation.
- Completion of all prerequisite courses with a minimum grade of "C."
- Ability to meet the school's technical standards for nursing practice (posted on the nursing website).

Admission to the program is contingent on admission to the university.

Once admitted to the program, the student must earn a minimum grade of "C-" or "Pass" in each required nursing course to remain in good standing in the nursing program. A grade of "D+/-", "F," "Fail" or "WF" (withdrawn failing) is considered a course failure. A student who for the first time receives a failure in a nursing course may, with school approval, repeat the course. A student who receives a failing grade in a nursing course may repeat one nursing course, with school approval. A student who receives a second failing grade in a nursing course will be ineligible to continue in the program.

Degree and Major Requirements

R.N. to B.S.N. Degree Requirements

Degree Requirements	Credit Hours
General Education courses ¹	
Arts and Humanities (formerly Cluster Two: Arts and Humanities)	9
American and Global Perspectives (formerly: Cluster Four: Social and Cultural Processes)	4
Co-requisite courses: PHIL 262 (ethics) and SOCI 101	6
Nursing courses	30
Experiential learning credit given for R.N. qualifications (up to)	37
Credit for Associate Degree and prerequisites ²	34
Total	120

Footnotes

¹ General Education (at JMU or as VCCS equivalents) and nursing prerequisite requirements.
² Prerequisite courses include the following JMU or VCCS equivalents: WRTC 103; BIO 270/BIO 270L and BIO 290/BIO 290L; PSYC 160; BIO 245/BIO 245L or CHEM 120.

Major Requirements

Additional information regarding the nursing curriculum can be found on the School of Nursing website.

Recommended Schedule for Majors

Full-Time Sequence of Classes

First Year

Fall Semester

NSG 325. Concepts in Aging **Credits: 3.00**
 NSG 333. Health Assessment **Credits: 3.00**
 NSG 462. Issues in Contemporary Nursing Practice **Credits: 3.00**
 NSG 463. Professional Role Transition **Credits: 3.00**

Total: 12 Credit Hours

Spring Semester

NSG 460. Healthcare Informatics **Credits: 3.00**
 NSG 461. Pathophysiology and Pharmacology **Credits: 3.00**
 NSG 464. Introduction to Nursing Research **Credits: 3.00**
 NSG 471. Leadership and Management in Health Care **Credits: 3.00**

Total: 12 Credit Hours

Summer Session

NSG 466. Community Health Practicum **Credits: 1.00**

NSG 469. Caring for the Public's Health: Community Health Nursing **Credits: 4.00**

Total: 5 Credit Hours

Footnote

¹ NSG 324. R.N./B.S.N. Strategies for Success is required during the first semester of enrollment in the program.

Part-Time Sequence of Classes

First Year

Fall Semester

NSG 333. Health Assessment **Credits: 3.00**

NSG 462. Issues in Contemporary Nursing Practice **Credits: 3.00**

Total: 6 Credit Hours

Spring Semester

NSG 461. Pathophysiology and Pharmacology **Credits: 3.00**

NSG 464. Introduction to Nursing Research **Credits: 3.00**

Total: 6 Credit Hours

Summer Session

NSG 466. Community Health Practicum **Credits: 1.00**

NSG 469. Caring for the Public's Health: Community Health Nursing **Credits: 4.00**

Total: 5 Credit Hours

Second Year

Fall Semester

NSG 325. Concepts in Aging **Credits: 3.00**

NSG 463. Professional Role Transition **Credits: 3.00**

Total: 6 Credit Hours

Spring Semester

NSG 460. Healthcare Informatics **Credits: 3.00**

NSG 471. Leadership and Management in Health Care **Credits: 3.00**

Total: 6 Credit Hours

Footnote

² NSG 324. R.N./B.S.N. Strategies for Success is required during the first semester of enrollment in the program.

Program Total: 120 Credit Hours

Department of Philosophy and Religion

Kenneth Pearce, **Department Head**

Main Office Phone: (540) 568-6394

Email: pearcekl@jmu.edu

Main Office Location: Cleveland Hall, Room 120

Website: <http://www.jmu.edu/philrel>

Professors

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Associate Professors

T. Adajian, C. Early, E. Gravett, C. Kilby, D. Kirkpatrick, W. Knorpp, A. Levinovitz, A. van Leeuwen

Assistant Professors

P. Antolic-Piper, A. Urquidez, C. Uy

Mission

Both philosophy and religious studies prepare students to meet people with diverse beliefs in a rapidly changing world. Students completing a philosophy and religion major will be able to think critically, rigorously analyze arguments, listen carefully to the viewpoints of others, construct views that are based on sound reasoning and evidence, and communicate clearly and persuasively in writing and in speaking. They will grapple with the insights of some of the greatest intellectual figures in history as they learn to contextualize texts, issues and phenomena to arrive at well-informed and enlightened interpretations.

The department awards a combined major in philosophy and religion, with students choosing one of four possible concentrations: philosophy, religion, interdisciplinary philosophy or interdisciplinary religion. The interdisciplinary concentrations, designed for students who are also studying another subject, allow relevant classes from other disciplines to count toward the major in philosophy and religion.

Emphases of the Philosophy Program

Philosophy is a discipline that explores fundamental questions about the meaning of life, the nature of knowledge and the mind, what actions are moral, and what exists. Students completing a major with a concentration in philosophy or interdisciplinary philosophy will become versed in the major movements, problems, writings and concepts in the history of Western philosophy. They will also have the opportunity to study other philosophical traditions, and to learn about ongoing philosophical debates today. The program concentrates on contemporary movements such as analytic

philosophy, existentialism, American philosophy and feminist philosophy, as well as on the major subdivisions of philosophy, including logic, ethics, metaphysics, epistemology, aesthetics, philosophy and law, philosophy of science, and philosophy of religion.

Students completing a major concentration in philosophy or interdisciplinary philosophy will gain skills in critical thinking, problem solving, analytical writing, and persuasive speaking and writing.

Emphases of the Religion Program

The religion program ensures that students gain breadth of exposure to diverse religious traditions as well as depth of specialized knowledge in at least one tradition or contemporary issue. Students completing a major with a concentration in religion or interdisciplinary religion will also develop skills in a range of disciplinary approaches and critical methodologies employed in the academic study of religion.

Students completing a major concentration in religion or interdisciplinary religion will be able to:

- Apply the methods of the academic study of religion to texts, rituals and other phenomena.
- Analyze historical and contemporary expressions of religions in their relevant social, political and cultural contexts.
- Construct informed interpretations of sacred texts by integrating skills in critical reading, critical thinking and contextualization.
- Conduct cogent analyses of historical or contemporary challenges facing religious traditions.
- Pose increasingly sophisticated questions regarding both "solvable" problems as well as "unanswerable" questions about the construction of ultimate reality.
- Immerse themselves in the perspective of worldviews different from their own and engage critically yet generously across those differences.
- Demonstrate proficient written and oral communication in a variety of settings for different audiences, formulating reasonable arguments based on evidence.
- Apply problem solving and critical thinking skills by conducting research or designing analyses, exhibiting rigorous inquiry and weighing evidence.
- Practice sound information literacy through verifying the reliability and relevance of sources, including detecting bias.

Career Opportunities and Marketable Skills

The philosophy and religion degree greatly enhances students' ability to navigate a dynamic and changing world by fostering nimbleness of mind, religious and philosophical literacy, a grounding in ethics, a habit of logical thinking, structured and disciplined argumentation, and practices in rigorous analysis. Our programs also equip students with solid skills in analysis, research, writing, speaking and presentations. As a result, our majors find rewarding and meaningful work in a wide variety of career fields. Many alumni of philosophy and religion pursue careers in intelligence analysis, government contracting, public health, business, public service, the non-profit sector, the technology sector, education, counseling, university administration or communications. Others have opened their own businesses, and many have attended seminary, graduate school, medical school or law school. Throughout their time in our programs, majors are guided along their career paths with the

help of the department as well as the University Career Center. While not requiring a second major, the interdisciplinary concentrations make it possible to combine this major with others, which may also enhance students' future employment opportunities.

Student Activities and Organizations in Philosophy and Religion

The department has excellent opportunities for building student community, engaging in student social activities and fostering intellectual development outside of the classroom, including a student-led religion and philosophy society, a philosophy and film club, a philosophy honor society (Phi Sigma Tau), and a religion honor society (Theta Alpha Kappa).

Preparation for Law School

Coordinator: Mark Piper

Email: pipermc@jmu.edu

Phone: (540) 568-3531

Students who plan to attend law school should seriously consider philosophy and religion as an undergraduate major, with a concentration in philosophy or interdisciplinary philosophy. Philosophy majors have historically scored among the highest on the LSAT, GRE and GMAT. Philosophy courses emphasize the kinds of skills that prepare students for the LSAT and the law school curriculum: reading, comprehending and analyzing complex texts; organizing and synthesizing information and drawing reasonable inferences from it; analyzing and evaluating the reasoning and arguments of others; and researching and writing essays and papers.

Law schools recommend that students choose an undergraduate major that challenges them and provides them with an understanding of what shapes human experience. Philosophy does an outstanding job on both counts. The requirements of the major leave students plenty of opportunity to acquire a broad education by exploring other areas.

Preparation for Theological Studies

Coordinator: Robert Brown

Email: brownre@jmu.edu

Phone: (540) 568-5415

Students join the pre-theology program to prepare for careers in the service of religious communities. Usually, these careers—such as ministry, religious education, counseling and chaplaincy—require specialized training and graduate degrees from theological seminaries, rabbinical schools or university divinity schools. The pre-theology adviser guides students toward courses and experiential learning at JMU that will provide an academic foundation for graduate studies in theology as well as an opportunity to develop their practical skills or vocational gifts. Students in this program may major in any field, although the Association for Theological Schools recommends substantial pre-professional training in philosophy and religion.

In the Department of Philosophy and Religion, pre-theology students will find a robust offering of courses ranging from the interpretation of religious texts to theology and ethics, and from the histories of particular religious traditions to cross-cultural topics in global religion. Class assignments develop students' skills in critical thinking, ethical reasoning, scriptural hermeneutics, and written

and oral communication, all of which theological schools highly value. The pre-theology adviser may direct students to relevant courses in foreign languages, social work, non-profit studies, humanitarian affairs, education or justice studies to complement their academic training in religion. Qualified students are encouraged to undertake independent studies or write honors theses in order to explore in greater depth the theological topics most important to them.

The department also offers students the opportunity to receive academic credit for internships with non-profit organizations and religious organizations in order to help students explore the particular forms of religious service they would like to pursue. Making connections with faith leaders within their own traditions helps students access larger networks of tradition-specific resources and contacts as they reflect on their goals and decide where to apply for further study in theology. We encourage students to visit various theological schools during the application season and to meet with representatives that the department invites to campus to discuss theology programs with students.

Christian Studies Minor

This minor is designed to provide students with a systematic and comprehensive understanding of the nature and history of Christianity as a religion of global significance. Students begin their studies by exploring the history, beliefs and practices of diverse Christian traditions, from the ancient to the modern. Additional courses address the complex relationship between Christianity and various facets of the contemporary world, such as politics, culture, religious pluralism, terrorism and race.

Required Courses

REL 202. Introduction to the New Testament **Credits: 3.00**
 REL 340. Introduction to Christianity **Credits: 3.00**
 REL 348. Christianity in Global Context **Credits: 3.00**

Choose three courses from the following, at least two of which must be at the 300- or 400-level: 9 Credit Hours

REL 201. Introduction to Hebrew Bible/Old Testament **Credits: 3.00**
 REL 218. Philosophy of Religion **Credits: 3.00**
 REL 280. Religion and Science **Credits: 3.00**
 REL 324. Latinx and Latin American Christianity **Credits: 3.00**
 REL 325. Catholicism in the Modern World **Credits: 3.00**
 REL 332. Born Again Religion **Credits: 3.00**
 REL 336. African American Religion **Credits: 3.00**
 REL 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**
 REL 450. Religion and Society **Credits: 3.00**
 REL 460. Topics in Ancient Jewish and Early Christian Literature **Credits: 3.00**
 REL 334. New Religious Movements **Credits: 3.00**
 REL 341. Early Christian Gospels: Origins, History and Conflict **Credits: 3.00**
 REL 342. The Historical Jesus Quest **Credits: 3.00**
 REL 343. Paul and the Origins of Christianity **Credits: 3.00**

Total: 18 Credit Hours

Ethics Minor

The 18 hour minor in ethics offers students an opportunity for deeper study into respected ethical thinkers and how ethical theory from philosophy and religion can be used to understand our individual and social lives. Students are to choose six courses total from either of the lists below. At least one of the six must be from the philosophy list, and at least one of the six must be from the religion list. Students majoring in Philosophy and Religion may double count two courses (6 credits) from their major toward the minor.

Other courses with a sufficiently ethical focus from philosophy, religion, or another department may be able to count towards the minor with the approval of the ethics minor coordinator.

Philosophy Courses

PHIL 200. Character and Virtue **Credits: 3.00**
 PHIL 262. Problems in Applied Ethics **Credits: 3.00**
 PHIL 330. Moral Theory **Credits: 3.00**
 PHIL 335. The Individual, the State, and Justice **Credits: 3.00**
 PHIL 350. The Philosophy of Feminism **Credits: 3.00**
 or
 WGSS 350. The Philosophy of Feminism **Credits: 3.00**
 PHIL 267. Philosophy of Law **Credits: 3.00**
 PHIL 440. Advanced Moral Philosophy **Credits: 3.00**

Religion Courses

REL 306. Gender and Sexuality in Islam **Credits: 3.00**
 REL 314. Gandhi and the Other 9/11 **Credits: 3.00**
 REL 315. Women and Religion **Credits: 3.00**
 REL 323. Comparative Ethics East and West **Credits: 3.00**
 REL 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**
 or
 IA 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**
 REL 366. Religion, Animals and the Environment **Credits: 3.00**
 REL 410. Dharma/Adharma: Hindu Ethical Reasoning **Credits: 3.00**
 REL 450. Religion and Society **Credits: 3.00**
 REL 488. Buddhism in the Modern World **Credits: 3.00**

Global Religion and Global Issues Minor

The minor is intended for students who want to better understand the role played by religion in contemporary global events: from religious terrorism to nonviolence, from the suppression of women to the advocacy of civil rights. In this minor, students will study major global religions and their impact on real-world social and political issues. The minor may be of particular interest to students in the social sciences but all students with an interest in the subject are welcome.

Required Courses

REL 101. Religions of the World [C2HQC] **Credits: 3.00**
 One Global Religious Traditions course
Credits / Units: 3.00
 One Religion and Social/Political Engagement course
Credits / Units: 3.00
 Three electives chosen from either group
Credits / Units: 9.00

Total: 18 Credit Hours

Global Religious Traditions Courses

REL 250. Islamic Religious Traditions **Credits: 3.00**
 REL 288. Introduction to Buddhism **Credits: 3.00**
 REL 310. (Re)thinking Order and Chaos: An Introduction to Hinduism **Credits: 3.00**
 REL 317. Introduction to Daoism **Credits: 3.00**
 REL 320. Judaism **Credits: 3.00**
 REL 330. Religions of Africa and the African Diaspora **Credits: 3.00**
 REL 348. Christianity in Global Context **Credits: 3.00**
 REL 388. Tibetan Buddhism **Credits: 3.00**

Religion and Social/Political Engagement Courses

REL 280. Religion and Science **Credits: 3.00**
 REL 306. Gender and Sexuality in Islam **Credits: 3.00**
 REL 314. Gandhi and the Other 9/11 **Credits: 3.00**
 REL 315. Women and Religion **Credits: 3.00**
 REL 323. Comparative Ethics East and West **Credits: 3.00**
 REL 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**
 or
 IA 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**
 REL 366. Religion, Animals and the Environment **Credits: 3.00**
 REL 371. Religion and Disability **Credits: 3.00**
 REL 372. Religion and Medicine, East and West **Credits: 3.00**
 REL 383. The Global Refugee Crisis and Religion **Credits: 3.00**
 REL 450. Religion and Society **Credits: 3.00**
 REL 488. Buddhism in the Modern World **Credits: 3.00**

Philosophy Minor

Required Courses

PHIL 101. Introduction to Philosophy [C2HQC] **Credits: 3.00**

Choose two of the following: 6 Credit Hours

PHIL 340. Ancient Greek Philosophy **Credits: 3.00**
 PHIL 341. Modern Philosophy **Credits: 3.00**
 PHIL 342. Medieval Philosophy **Credits: 3.00**
 PHIL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**

Three electives: 9 Credit Hours

At least two of which must be above PHIL 300 ¹

Total: 18 Credit Hours

Footnote

¹ Neither PHIL 120 nor PHIL 150 can be used as electives.

Religion Minor

The Religion minor equips students with skills in religious literacy: understanding how religion works in people's lives as well as in the larger historical, cultural and sociopolitical forces that shape our world. Students take courses across each of the Religion tracks in order to gain knowledge of a diverse spectrum of religious traditions and comparative issues. Courses may be taken in any order.

Core Course: 3 Credit Hours

REL 101. Religions of the World [C2HQC] **Credits: 3.00**

Choose one course in each track: 12 Credit Hours

(At least one of these must be 300 or 400 level)

Religion Tracks

Track 1: Eastern Traditions

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (when topic is Gandhi, Non-violence and Global Transformation)
 REL 288. Introduction to Buddhism **Credits: 3.00**
 REL 310. (Re)thinking Order and Chaos: An Introduction to Hinduism **Credits: 3.00**
 REL 313. Classical Chinese Thought **Credits: 3.00**
 REL 314. Gandhi and the Other 9/11 **Credits: 3.00**
 REL 317. Introduction to Daoism **Credits: 3.00**
 REL 323. Comparative Ethics East and West **Credits: 3.00**
 or
 PHIL 323. Comparative Ethics East and West **Credits: 3.00**
 REL 372. Religion and Medicine, East and West **Credits: 3.00**
 REL 386. Topics in Buddhist Studies **Credits: 3.00**
 REL 387. Buddhist Literature and Liberation **Credits: 3.00**
 REL 388. Tibetan Buddhism **Credits: 3.00**
 REL 410. Dharma/Adharma: Hindu Ethical Reasoning **Credits: 3.00**
 REL 488. Buddhism in the Modern World **Credits: 3.00**

Track 2: Western Traditions

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (when topic is Islamic Civilization)
 REL 201. Introduction to Hebrew Bible/Old Testament **Credits: 3.00**
 REL 202. Introduction to the New Testament **Credits: 3.00**
 REL 210. Religion in America **Credits: 3.00**
 REL 250. Islamic Religious Traditions **Credits: 3.00**
 REL 304. Art, Religion and Identity in Medieval Sicily **Credits: 3.00**

REL 306. Gender and Sexuality in Islam **Credits: 3.00**
 REL 307. Knowledge and Identity in Islam **Credits: 3.00**
 REL 320. Judaism **Credits: 3.00**
 REL 323. Comparative Ethics East and West **Credits: 3.00**
 or
 PHIL 323. Comparative Ethics East and West **Credits: 3.00**
 REL 324. Latinx and Latin American Christianity **Credits: 3.00**
 REL 325. Catholicism in the Modern World **Credits: 3.00**
 REL 330. Religions of Africa and the African Diaspora **Credits: 3.00**
 REL 332. Born Again Religion **Credits: 3.00**
 REL 334. New Religious Movements **Credits: 3.00**
 REL 336. African American Religion **Credits: 3.00**
 PHIL 339. Islamic Philosophy **Credits: 3.00**
 REL 340. Introduction to Christianity **Credits: 3.00**
 REL 342. The Historical Jesus Quest **Credits: 3.00**
 REL 343. Paul and the Origins of Christianity **Credits: 3.00**
 REL 348. Christianity in Global Context **Credits: 3.00**
 REL 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**
 or
 IA 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**
 REL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**
 or
 PHIL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**
 REL 440. Topics in Religion in America **Credits: 3.00**
 REL 460. Topics in Ancient Jewish and Early Christian Literature **Credits: 3.00**

Track 3: Biblical Studies and Theology

REL 201. Introduction to Hebrew Bible/Old Testament **Credits: 3.00**
 REL 202. Introduction to the New Testament **Credits: 3.00**
 REL 218. Philosophy of Religion **Credits: 3.00**
 or
 PHIL 218. Philosophy of Religion **Credits: 3.00**
 REL 325. Catholicism in the Modern World **Credits: 3.00**
 REL 333. Angels, Demons and Dreams in Ancient Judaism and Christianity **Credits: 3.00**
 REL 340. Introduction to Christianity **Credits: 3.00**
 REL 341. Early Christian Gospels: Origins, History and Conflict **Credits: 3.00**
 REL 342. The Historical Jesus Quest **Credits: 3.00**
 REL 343. Paul and the Origins of Christianity **Credits: 3.00**
 REL 344. Gospel of John **Credits: 3.00**
 REL 366. Religion, Animals and the Environment **Credits: 3.00**
 or
 ENVT 366. Religion, Animals and the Environment **Credits: 3.00**
 REL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**
 or
 PHIL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**
 REL 377. Hermeneutics **Credits: 3.00**
 or
 PHIL 377. Hermeneutics **Credits: 3.00**
 REL 460. Topics in Ancient Jewish and Early Christian Literature **Credits: 3.00**

Track 4: Religion and Society

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (when topic is Gandhi, Non-violence and Global Transformation)

REL 102. Religion, Spirituality and the Meaning of Life [C2HQC] **Credits: 3.00**
 REL 210. Religion in America **Credits: 3.00**
 REL 280. Religion and Science **Credits: 3.00**
 REL 304. Art, Religion and Identity in Medieval Sicily **Credits: 3.00**
 REL 306. Gender and Sexuality in Islam **Credits: 3.00**
 REL 310. (Re)thinking Order and Chaos: An Introduction to Hinduism **Credits: 3.00**
 REL 314. Gandhi and the Other 9/11 **Credits: 3.00**
 REL 315. Women and Religion **Credits: 3.00**
 REL 322. Sociology of Religion **Credits: 3.00**
 or
 SOCI 322. Sociology of Religion **Credits: 3.00**
 REL 324. Latinx and Latin American Christianity **Credits: 3.00**
 REL 330. Religions of Africa and the African Diaspora **Credits: 3.00**
 REL 332. Born Again Religion **Credits: 3.00**
 REL 334. New Religious Movements **Credits: 3.00**
 REL 336. African American Religion **Credits: 3.00**
 REL 348. Christianity in Global Context **Credits: 3.00**
 REL 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**
 or
 IA 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**
 REL 365. Religion and Film **Credits: 3.00**
 REL 366. Religion, Animals and the Environment **Credits: 3.00**
 or
 ENVT 366. Religion, Animals and the Environment **Credits: 3.00**
 REL 371. Religion and Disability **Credits: 3.00**
 REL 372. Religion and Medicine, East and West **Credits: 3.00**
 REL 373. Race and Religion **Credits: 3.00**
 REL 383. The Global Refugee Crisis and Religion **Credits: 3.00**
 REL 388. Tibetan Buddhism **Credits: 3.00**
 REL 410. Dharma/Adharma: Hindu Ethical Reasoning **Credits: 3.00**
 REL 450. Religion and Society **Credits: 3.00**
 REL 488. Buddhism in the Modern World **Credits: 3.00**

Choose one Religion elective: 3 Credit Hours

Your elective may be from any track, or it may be one of these courses outside the track system:

REL 200. Exploring Religion **Credits: 3.00**
 REL 490. Special Studies in Religion **Credits: 3.00**
 REL 493. Religion Course Assistantship **Credits: 3.00**
 REL 495. Religion Internship **Credits: 3.00**
 REL 499A. Honors Thesis **Credits: 1.00**
 REL 499B. Honors Thesis **Credits: 3.00**
 REL 499C. Honors Thesis **Credits: 2.00**

Total: 18 Credit Hours

Philosophy and Religion, B.A.

Program Description

The Bachelor of Arts degree in philosophy and religion empowers students to analyze diverse worldviews and value systems. In a world that is increasingly pluralistic, ideologically driven and globally connected, skills in critical thinking

and cross-cultural understanding are more important than ever. Our students apply this degree to a wide variety of career fields. Students choose from among four concentrations: philosophy, interdisciplinary philosophy, religion or interdisciplinary religion. The interdisciplinary concentrations allow students to count relevant courses in another field toward the major and are a particularly good fit for students choosing philosophy and religion as a second major.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
University electives	26-43
Major requirements (listed below)	33-36
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Language's placement test.

Major Requirements

Concentration Core Courses: 12 Credit Hours

PHIL 250. Introduction to Symbolic Logic **Credits: 3.00**

PHIL 330. Moral Theory **Credits: 3.00**

PHIL 340. Ancient Greek Philosophy **Credits: 3.00**

PHIL 341. Modern Philosophy **Credits: 3.00**

Choose one of the following

Metaphysics/Epistemology courses: 3 Credit Hours

Depending on the manner in which they are taught, the following topics classes may be counted toward the metaphysics/epistemology requirement if they are approved by petition to the academic unit head: PHIL 390 and PHIL 391.

PHIL 218. Philosophy of Religion **Credits: 3.00**

or

REL 218. Philosophy of Religion **Credits: 3.00**

PHIL 300. Knowledge and Belief **Credits: 3.00**

PHIL 311. Metaphysics **Credits: 3.00**

PHIL 380. Philosophy of Language **Credits: 3.00**

PHIL 392. Philosophy of Mind **Credits: 3.00**

PHIL 394. Self and Identity **Credits: 3.00**

PHIL 396. Philosophy of Physics **Credits: 3.00**

PHIL 397. Philosophy of Space and Time **Credits: 3.00**

PHIL 398. Philosophy of Quantum Theory **Credits: 3.00**

PHIL 410. Philosophy of Science **Credits: 3.00**

Philosophy electives (nine credits at the 300 level or above): 12 Credit Hours

If the student takes PHIL 101 as part of Cluster Two in the General Education program it can double count as one course of this elective section. Neither PHIL 120 nor PHIL 150 can be used as an elective.

Cognate of three courses from one or more disciplinary areas outside of philosophy: 9 Credit Hours

Major Requirements Total: 36 Credit Hours

Philosophy and Religion Concentrations

Philosophy Concentration

Core Courses: 18 Credit Hours

PHIL 101. Introduction to Philosophy [C2HQC] **Credits: 3.00**

PHIL 250. Introduction to Symbolic Logic **Credits: 3.00**

PHIL 330. Moral Theory **Credits: 3.00**

PHIL 340. Ancient Greek Philosophy **Credits: 3.00**

PHIL 341. Modern Philosophy **Credits: 3.00**

REL 101. Religions of the World [C2HQC] **Credits: 3.00**

Choose one History of Philosophy course: 3 Credit Hours

Depending on the manner in which they are taught, the following topics classes may be counted toward the history requirement if they are approved by petition to the academic unit head: PHIL 390, PHIL 391 and PHIL 460.

PHIL 339. Islamic Philosophy **Credits: 3.00**

PHIL 342. Medieval Philosophy **Credits: 3.00**

PHIL 343. Stoics, Skeptics and Epicureans **Credits: 3.00**

PHIL 344. Existentialism **Credits: 3.00**

PHIL 370. American Philosophy **Credits: 3.00**

PHIL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**
or

REL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**

PHIL 376. Nietzsche **Credits: 3.00**

PHIL 377. Hermeneutics **Credits: 3.00**

or

REL 377. Hermeneutics **Credits: 3.00**

PHIL 430. Analytic Philosophy **Credits: 3.00**

PHIL 466. Kant **Credits: 3.00**

PHIL 468. Phenomenology **Credits: 3.00**

Choose one Metaphysics/Epistemology course: 3 Credit Hours

Depending on the manner in which they are taught, the following topics classes may be counted toward the metaphysics/epistemology requirement if they are approved by petition to the academic unit head: PHIL 390 and PHIL 391.

PHIL 218. Philosophy of Religion **Credits: 3.00**

or

REL 218. Philosophy of Religion **Credits: 3.00**

PHIL 300. Knowledge and Belief **Credits: 3.00**

PHIL 311. Metaphysics **Credits: 3.00**

PHIL 380. Philosophy of Language **Credits: 3.00**

PHIL 392. Philosophy of Mind **Credits: 3.00**

PHIL 394. Self and Identity **Credits: 3.00**

PHIL 396. Philosophy of Physics **Credits: 3.00**

PHIL 397. Philosophy of Space and Time **Credits: 3.00**

PHIL 398. Philosophy of Quantum Theory **Credits: 3.00**

PHIL 410. Philosophy of Science **Credits: 3.00**

Philosophy electives (six credits at the 300 level or above): 9 Credit Hours

Neither PHIL 120 nor PHIL 150 can be used as an elective.

Philosophy Concentration Total: 33 Credit Hours

Interdisciplinary Philosophy Concentration

Core Courses: 12 Credit Hours

PHIL 101. Introduction to Philosophy [C2HQC] **Credits: 3.00**

PHIL 250. Introduction to Symbolic Logic **Credits: 3.00**

PHIL 330. Moral Theory **Credits: 3.00**

PHIL 340. Ancient Greek Philosophy **Credits: 3.00**

PHIL 341. Modern Philosophy **Credits: 3.00**

REL 101. Religions of the World [C2HQC] **Credits: 3.00**

Choose one of the following

Metaphysics/Epistemology courses: 3 Credit Hours

Depending on the manner in which they are taught, the following topics classes may be counted toward the metaphysics/epistemology requirement if they are approved by petition to the academic unit head: PHIL 390 and PHIL 391.

PHIL 218. Philosophy of Religion **Credits: 3.00**

or

REL 218. Philosophy of Religion **Credits: 3.00**

PHIL 300. Knowledge and Belief **Credits: 3.00**

PHIL 311. Metaphysics **Credits: 3.00**

PHIL 380. Philosophy of Language **Credits: 3.00**

PHIL 392. Philosophy of Mind **Credits: 3.00**

PHIL 394. Self and Identity **Credits: 3.00**

PHIL 396. Philosophy of Physics **Credits: 3.00**

PHIL 397. Philosophy of Space and Time **Credits: 3.00**

PHIL 398. Philosophy of Quantum Theory **Credits: 3.00**

PHIL 410. Philosophy of Science **Credits: 3.00**

Philosophy electives (three credits at the 300 level or above): 6 Credit Hours

Neither PHIL 120 nor PHIL 150 can be used as an elective.

Cognate of three courses from one or more disciplinary areas outside of philosophy: 9 Credit Hours

Interdisciplinary Philosophy Concentration Total: 36 Credit Hours

Religion Concentration

Concentration Core Courses: 9 Credit Hours

These required courses form the core of your major concentration:

PHIL 101. Introduction to Philosophy [C2HQC] **Credits: 3.00**

REL 101. Religions of the World [C2HQC] **Credits: 3.00**

REL 200. Exploring Religion **Credits: 3.00**

Capstone: 3 Credit Hours

Your capstone also fulfills one of your track or breadth requirements. Typically, one capstone is offered per semester. Most students take their capstone course in their junior or senior years.

Choose one of the following courses:

REL 410. Dharma/Adharma: Hindu Ethical Reasoning **Credits: 3.00**

REL 440. Topics in Religion in America **Credits: 3.00**

REL 450. Religion and Society **Credits: 3.00**

REL 460. Topics in Ancient Jewish and Early Christian Literature **Credits: 3.00**

REL 488. Buddhism in the Modern World **Credits: 3.00**

Track Requirements: 12 Credit Hours

Choose 4 courses from one track. This will be your home track.

Breadth Requirements: 9 Credit Hours

Choose 3 additional courses: one from each of the other tracks. None of these may be cross-listed in your home track.

Religion Electives: 3 Credit Hours

Choose an additional religion course in order to reach 33 total credit hours for the major. Your elective may be from any of the tracks.

It may also include any of these courses outside the track system:

REL 490. Special Studies in Religion **Credits: 3.00**

REL 493. Religion Course Assistantship **Credits: 3.00**

REL 495. Religion Internship **Credits: 3.00**

REL 499A. Honors Thesis **Credits: 1.00**

REL 499B. Honors Thesis **Credits: 3.00**

Religion Concentration Total: 33 Credit Hours

Religion Tracks

Track 1: Eastern Traditions

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (*when topic is Gandhi, Non-violence and Global Transformation*)

REL 288. Introduction to Buddhism **Credits: 3.00**

REL 310. (Re)thinking Order and Chaos: An Introduction to Hinduism **Credits: 3.00**

REL 313. Classical Chinese Thought **Credits: 3.00**

REL 314. Gandhi and the Other 9/11 **Credits: 3.00**

REL 317. Introduction to Daoism **Credits: 3.00**

REL 323. Comparative Ethics East and West **Credits: 3.00**

REL 372. Religion and Medicine, East and West **Credits: 3.00**

REL 386. Topics in Buddhist Studies **Credits: 3.00**

REL 387. Buddhist Literature and Liberation **Credits: 3.00**

REL 388. Tibetan Buddhism **Credits: 3.00**

REL 410. Dharma/Adharma: Hindu Ethical Reasoning **Credits: 3.00**

REL 488. Buddhism in the Modern World **Credits: 3.00**

Track 2: Western Traditions

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (*when topic is Islamic Civilization*)

REL 201. Introduction to Hebrew Bible/Old Testament **Credits: 3.00**

REL 202. Introduction to the New Testament **Credits: 3.00**

REL 210. Religion in America **Credits: 3.00**

REL 250. Islamic Religious Traditions **Credits: 3.00**

REL 323. Comparative Ethics East and West **Credits: 3.00**

REL 324. Latinx and Latin American Christianity **Credits: 3.00**

REL 325. Catholicism in the Modern World **Credits: 3.00**

REL 330. Religions of Africa and the African Diaspora **Credits: 3.00**

REL 332. Born Again Religion **Credits: 3.00**

REL 334. New Religious Movements **Credits: 3.00**

REL 336. African American Religion **Credits: 3.00**

REL 340. Introduction to Christianity **Credits: 3.00**

REL 342. The Historical Jesus Quest **Credits: 3.00**

REL 343. Paul and the Origins of Christianity **Credits: 3.00**

REL 348. Christianity in Global Context **Credits: 3.00**

HIST 362. American Material Religion **Credits: 3.00**

REL 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**
or

IA 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**

REL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**
or

PHIL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**

REL 440. Topics in Religion in America **Credits: 3.00**

REL 460. Topics in Ancient Jewish and Early Christian Literature **Credits: 3.00**

Track 3: Biblical Studies and Theology

REL 201. Introduction to Hebrew Bible/Old Testament **Credits: 3.00**

REL 202. Introduction to the New Testament **Credits: 3.00**

REL 218. Philosophy of Religion **Credits: 3.00**
or

PHIL 218. Philosophy of Religion **Credits: 3.00**

REL 325. Catholicism in the Modern World **Credits: 3.00**

REL 333. Angels, Demons and Dreams in Ancient Judaism and Christianity **Credits: 3.00**

REL 340. Introduction to Christianity **Credits: 3.00**

REL 341. Early Christian Gospels: Origins, History and Conflict **Credits: 3.00**

REL 342. The Historical Jesus Quest **Credits: 3.00**

REL 343. Paul and the Origins of Christianity **Credits: 3.00**

REL 366. Religion, Animals and the Environment **Credits: 3.00**
or

ENVT 366. Religion, Animals and the Environment **Credits: 3.00**

REL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**
or

PHIL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**

REL 377. Hermeneutics **Credits: 3.00**
or

PHIL 377. Hermeneutics **Credits: 3.00**

REL 460. Topics in Ancient Jewish and Early Christian Literature **Credits: 3.00**

Track 4: Religion and Society

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (*when topic is Gandhi, Non-violence and Global Transformation*)

REL 102. Religion, Spirituality and the Meaning of Life [C2HQC] **Credits: 3.00**

REL 210. Religion in America **Credits: 3.00**

REL 280. Religion and Science **Credits: 3.00**

REL 306. Gender and Sexuality in Islam **Credits: 3.00**

REL 310. (Re)thinking Order and Chaos: An Introduction to Hinduism **Credits: 3.00**

REL 314. Gandhi and the Other 9/11 **Credits: 3.00**

REL 315. Women and Religion **Credits: 3.00**

REL 322. Sociology of Religion **Credits: 3.00**
or

SOCI 322. Sociology of Religion **Credits: 3.00**

REL 324. Latinx and Latin American Christianity **Credits: 3.00**

REL 330. Religions of Africa and the African Diaspora **Credits: 3.00**

REL 332. Born Again Religion **Credits: 3.00**

REL 334. New Religious Movements **Credits: 3.00**

REL 336. African American Religion **Credits: 3.00**

REL 348. Christianity in Global Context **Credits: 3.00**

REL 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**
or

IA 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**

REL 365. Religion and Film **Credits: 3.00**

REL 366. Religion, Animals and the Environment **Credits: 3.00**

or

ENVT 366. Religion, Animals and the Environment **Credits: 3.00**

REL 371. Religion and Disability **Credits: 3.00**

REL 372. Religion and Medicine, East and West **Credits: 3.00**

REL 373. Race and Religion **Credits: 3.00**

REL 383. The Global Refugee Crisis and Religion **Credits: 3.00**

REL 388. Tibetan Buddhism **Credits: 3.00**

REL 410. Dharma/Adharma: Hindu Ethical Reasoning **Credits: 3.00**

REL 450. Religion and Society **Credits: 3.00**

REL 488. Buddhism in the Modern World **Credits: 3.00**

Interdisciplinary Religion Concentration

Core Courses: 6 Credit Hours

These required courses form the core of your major concentration:

PHIL 101. Introduction to Philosophy [C2HQC] **Credits: 3.00**

REL 101. Religions of the World [C2HQC] **Credits: 3.00**

REL 200. Exploring Religion **Credits: 3.00**

Capstone: 3 Credit Hours

Your capstone also fulfills one of your track or breadth requirements. Typically, one capstone is offered per semester. Most students take their capstone course in their junior or senior years.

Choose one of the following courses:

REL 410. Dharma/Adharma: Hindu Ethical Reasoning **Credits: 3.00**

REL 440. Topics in Religion in America **Credits: 3.00**

REL 450. Religion and Society **Credits: 3.00**

REL 460. Topics in Ancient Jewish and Early Christian Literature **Credits: 3.00**

REL 488. Buddhism in the Modern World **Credits: 3.00**

Track Requirements: 12 Credit Hours

Choose 4 courses from one track. This will be your home track.

Breadth Requirements: 6 Credit Hours

Choose two additional courses outside of your home track. These two courses cannot be from the same track and they cannot be cross-listed in your home track.

Interdisciplinary Requirements: 6 Credit Hours

Choose two relevant courses from other disciplines or departments outside Religion (in consultation with your Religion adviser).

Religion Elective: 3 Credit Hours

Choose an additional religion course in order to reach 36 total credit hours for the major. Your electives may be from any of the tracks. They may also include any of these courses outside the track system:

REL 490. Special Studies in Religion **Credits: 3.00**

REL 493. Religion Course Assistantship **Credits: 3.00**

REL 495. Religion Internship **Credits: 3.00**

REL 499A. Honors Thesis **Credits: 1.00**

REL 499B. Honors Thesis **Credits: 3.00**

Interdisciplinary Religion Concentration Total: 36 Credit Hours

Recommended Schedule for Philosophy Concentrators

The following outline is a sample four-year program. The actual courses and sequence a student takes may vary.

First Year

Introductory courses in major *Credits: 6.00* (REL 101 recommended for the interdisciplinary religion concentration)

B.A. degree requirements *Credits: 6.00-8.00*

General Education courses *Credits: 6.00-18.00*¹

First Year Total: 30 Credit Hours

Second Year

Required courses in major *Credits: 6.00*

B.A. degree requirements or electives *Credits: 6.00*

General Education courses *Credits: 18.00*

Second Year Total: 30 Credit Hours

Third Year

Requirements and electives in philosophy or religion *Credits: 12.00*

Electives (may be outside of major) *Credits: 12.00*

General Education courses *Credits: 6.00*

Third Year Total: 30 Credit Hours

Footnote

¹ Students should adjust General Education and foreign language load to achieve 30 hours total.

Recommended Schedule for Religion Concentrators

The following outline is a sample four-year program. The actual courses and sequence a student takes may vary. Students may declare a major in philosophy and religion at any point in their careers.

First Year

REL 101. Religions of the World [C2HQC] **Credits: 3.00**

One additional Religion course *Credits: 3.00*

General Education courses ¹ **Credits: 12.00-15.00**

B.A. requirements/university electives **Credits: 9.00-12.00**

First Year Total: 30 Credit Hours

Second Year

PHIL 101. Introduction to Philosophy [C2HQC] **Credits: 3.00**
Two additional religion courses **Credits: 6.00**
General Education courses **Credits: 12.00-15.00**
B.A. degree requirements / university electives **Credits: 6.00-9.00**

Second Year Total: 30 Credit Hours

Third Year

REL 200. Exploring Religion **Credits: 3.00**
Two additional religion courses **Credits: 6.00**
General Education courses **Credits: 12.00-15.00**
B.A. degree requirements / university electives **Credits: 6.00-9.00**

Third Year Total: 30 Credit Hours

Fourth Year

Religion capstone course **Credits: 3.00**
Two additional religion courses **Credits: 6.00**
B.A. degree requirements / university electives **Credits: 21.00**

Fourth Year Total: 30 Credit Hours

Recommended Schedule for Interdisciplinary Religion Concentrators

The following outline is a sample four-year program. The actual courses and sequence a student takes may vary. Students may declare a major in philosophy and religion at any point in their careers.

First Year

REL 101. Religions of the World [C2HQC] **Credits: 3.00**
One additional religion course **Credits: 3.00**
General Education courses¹ **Credits: 12.00-15.00**
B.A. degree requirements / university electives **Credits: 9.00-12.00**

First Year Total: 30 Credit Hours

Second Year

PHIL 101. Introduction to Philosophy [C2HQC] **Credits: 3.00**
Two additional religion courses **Credits: 6.00**
General Education courses **Credits: 12.00-15.00**
B.A. degree requirements / university electives **Credits: 6.00-9.00**

Second Year Total: 30 Credit Hours

Third Year

REL 200. Exploring Religion **Credits: 3.00**
One additional religion course **Credits: 3.00**
Interdisciplinary requirement (one relevant course from another discipline or department) **Credits: 3.00**
General Education courses **Credits: 12.00-15.00**
B.A. degree requirements / university electives **Credits: 6.00-9.00**

Third Year Total: 30 Credit Hours

Fourth Year

Religion capstone course **Credits: 3.00**
Two additional religion courses **Credits: 6.00**
Interdisciplinary requirement (one relevant course from another discipline or department) **Credits: 3.00**
B.A. degree requirements / university electives **Credits: 18.00**

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Department of Physics and Astronomy

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Instructor

L. Lucatorto

Lecturer

J. Sterlace

Mission

The mission of the Department of Physics and Astronomy is the preparation of scientifically enlightened citizens. Science literacy is promoted by the production of teachers, researchers, technical professionals and knowledgeable individuals through the integration of classroom and experiential learning.

Vision

We strive to be a leading undergraduate physics and astronomy department by building a research-active, student-centered community.

Values

Excellence, integrity and mutual respect are the core values that define our department. The vigorous pursuit of research with undergraduates is central to extending our understanding of nature and the engagement of students directly in the practice of physics and astronomy.

Service to the university, the public and the profession is essential for continued vitality of science education and research.

Goals

To help students:

- Appreciate the role of science in society and the historical development of physics in the ongoing quest to discover the structure of the universe.
- Gain an understanding of the basic principles and the experimental basis of the various fields of physics and the logical relationships of the various fields.
- Develop competence in using computers for computation, data acquisition, numerical control, device development, and information acquisition and processing.
- Become capable problem solvers using techniques that require mathematical skills, conceptual and mathematical models, order-of-magnitude estimates, and an understanding of limiting cases.
- Develop competence in designing, constructing, and using laboratory instruments, and to draw valid conclusions from experimental data.
- Improve written and oral technical communication skills.

Co-Curricular and Organizations

- Society of Physics Students

Physics, B.A.

Program Description

Degree and major requirements for the B.A. program in physics.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
University electives	23-37
Major core requirements ³	39

Degree Requirements	Credit Hours
	26-39
Major concentration requirements ³ Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level (typically 232) of the student's chosen language or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures' placement test.

³ Some of the courses required for the major complete Cluster Three of General Education. PHIL 101 is part of Cluster Two.

Major Requirements

Required Courses: 27 Credits Hours

- PHYS 105. Foundations of Physics **Credits: 1.00**
- PHYS 247. Data Acquisition and Analysis Techniques II **Credits: 1.00**
- PHYS 260. University Physics III **Credits: 3.00**
- PHYS 270. Modern Physics **Credits: 3.00 and**
- PHYS 270L. Modern Physics Laboratory **Credits: 1.00**
- MATH 235. Calculus I [C3QR] **Credits: 4.00**
- MATH 236. Calculus II **Credits: 4.00**
- MATH 237. Calculus III **Credits: 4.00**
- CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
- CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
- PHYS 391. Seminar **Credits: 0.00 – 1.00**
- PHYS 392. Seminar **Credits: 1.00**
- PHYS 491. Seminar **Credits: 0.00 – 1.00**
- PHYS 492. Seminar **Credits: 1.00**

Choose one of the following pairs of introductory courses: 6 Credit Hours

- PHYS 140. College Physics I [C3PP] **Credits: 3.00 and**
- PHYS 150. College Physics II **Credits: 3.00**
- or
- PHYS 240. University Physics I [C3PP] **Credits: 3.00 and**
- PHYS 250. University Physics II **Credits: 3.00**

Choose one of the following pairs of lab courses: 2 Credit Hours

- PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00 and**
- PHYS 150L. General Physics Laboratory **Credits: 1.00**
- or
- PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00 and**
- PHYS 250L. University Physics Laboratory II **Credits: 1.00**

Choose one of the following: 4 Credit Hours

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
or
GEOL 110. Physical Geology [C3NS] **Credits: 3.00**

Total: 39 Credit Hours

Concentrations

Each student, in consultation with his/her faculty adviser, will choose one of the following program concentrations:

Individual Option
Professional

Individual Option Concentration

The individual option is a course of study chosen specifically to match the interest and career plans of the student. This option will allow custom-designed cross disciplinary majors such as the history of physics and physics and the fine arts.

A student electing the individual option must complete the major core requirements of the B.A. in physics and will select a program consisting of a coherent collection of a minimum of 26 additional credits of physics courses numbered above 270, astronomy courses numbered above 301 and courses in related fields. This individualized program must be selected in consultation with a faculty adviser in the department and must be approved by that adviser, the department head and one other faculty member in the department. The student needs to declare this concentration at least 3 semesters prior to graduation. The individualized program, as approved by the department and accepted by the student, becomes the major requirements for the student. Students are expected to review progress toward completion of the selected program of study with their faculty adviser.

Professional Concentration, Pre-Medical Preparation Track

Students in this concentration must complete the following courses in addition to core requirements:

Required Courses: 13 Credit Hours

MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**
PHYS 340. Mechanics **Credits: 3.00**
PHYS 350. Electricity and Magnetism **Credits: 3.00**
Three credits chosen from PHYS courses at the 265-level or higher **Credits: 3.00**

Additional Information

Students are expected to review progress toward completion of the selected program of study with their faculty adviser.

Pre-Medical Preparation Track

Recommended Schedule for Majors

Students pursuing the B.A. in physics and astronomy with a professional concentration may complete a track in pre-medical preparation. In addition to degree and General Education requirements, students complete the following courses.

First Year Courses

PHYS 105. Foundations of Physics **Credits: 1.00**
PHYS 240. University Physics I [C3PP] **Credits: 3.00**

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**
or
PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00**

PHYS 250. University Physics II **Credits: 3.00**

PHYS 150L. General Physics Laboratory **Credits: 1.00**
or
PHYS 250L. University Physics Laboratory II **Credits: 1.00**

PHYS 246. Data Acquisition and Analysis Techniques I **Credits: 1.00**
MATH 235. Calculus I [C3QR] **Credits: 4.00**
MATH 236. Calculus II **Credits: 4.00**
CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
CHEM 132. General Chemistry II **Credits: 3.00**
CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

Second Year Courses

PHYS 247. Data Acquisition and Analysis Techniques II **Credits: 1.00**
PHYS 260. University Physics III **Credits: 3.00**

PHYS 270. Modern Physics **Credits: 3.00 and**
PHYS 270L. Modern Physics Laboratory **Credits: 1.00**

MATH 237. Calculus III **Credits: 4.00**
MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**
CHEM 241. Organic Chemistry I **Credits: 3.00**
CHEM 242. Organic Chemistry II **Credits: 3.00**
CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**

Third Year Courses

PHYS 340. Mechanics **Credits: 3.00**
PHYS 350. Electricity and Magnetism **Credits: 3.00**
PHYS 391. Seminar **Credits: 0.00 – 1.00**
PHYS 392. Seminar **Credits: 1.00**
PHYS elective 265 or higher (*PHYS 326 recommended*)
CHEM 361. Biochemistry I **Credits: 3.00**

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

BIO 150. Foundations of Biology II **Credits: 3.00 and**
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

Fourth Year Courses

Two PHYS electives 265 or higher
PHYS 491. Seminar **Credits: 0.00 – 1.00**
Additional courses suggested by the Pre-professional Health program

Program Total: 120 Credit Hours

Physics, B.S.

Program Description

Degree and major requirements for the B.S. program in physics.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ^{1,2}	41
Quantitative requirement (in addition to General Education) ²	3
Scientific Literacy requirement (in addition to General Education) ²	3-4
University electives	0-23
Major core requirements (listed below) ²	39
Major program concentration requirements	24-44
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within the major.

² Some major core courses simultaneously satisfy degree and some General Education requirements so that a student need not take more than 120 credit hours to satisfy graduation requirements. The quantitative (3 credit hours), scientific literacy (3-4 credit hours) and part of the General Education Cluster 3 (7 credit hours) requirements are fulfilled with major core courses reducing those three categories by 13-14 credit hours.

Major Requirements

Core Requirements Required Courses: 39 Credit Hours

Core requirements for all B.S. physics majors.

PHYS 105. Foundations of Physics **Credits: 1.00**
PHYS 140. College Physics I [C3PP] **Credits: 3.00**
or

PHYS 240. University Physics I [C3PP] **Credits: 3.00**
PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**
or
PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00**
PHYS 150. College Physics II **Credits: 3.00**
or
PHYS 250. University Physics II **Credits: 3.00**
PHYS 150L. General Physics Laboratory **Credits: 1.00**
or
PHYS 250L. University Physics Laboratory II **Credits: 1.00**
PHYS 247. Data Acquisition and Analysis Techniques II **Credits: 1.00**
PHYS 260. University Physics III **Credits: 3.00**
PHYS 270. Modern Physics **Credits: 3.00 and**
PHYS 270L. Modern Physics Laboratory **Credits: 1.00**
PHYS 340. Mechanics **Credits: 3.00**
PHYS 350. Electricity and Magnetism **Credits: 3.00**
CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
MATH 235. Calculus I [C3QR] **Credits: 4.00**
MATH 236. Calculus II **Credits: 4.00**
MATH 237. Calculus III **Credits: 4.00**

Concentrations

Each student, in consultation with their faculty adviser, will choose one of the following program concentrations.

Applied Physics Concentration

The applied physics concentration is designed to prepare students for careers in a wide variety of scientific areas including laboratory and industrial settings. Students are strongly encouraged to complete at least one of six areas of interest for completion of degree requirements: applied nuclear physics, computational physics, materials physics, electronics and instrumentation, geophysics and biophysics.

All students in the applied physics concentration must complete the following courses:

Applied Physics Concentration Required Courses (in addition to core requirements): 20-23 Credit Hours

CHEM 132. General Chemistry II **Credits: 3.00**
and
CHEM 132L. General Chemistry Laboratory **Credits: 1.00**
CS 149. Introduction to Programming **Credits: 3.00**
or
MATH 248. Computers and Numerical Algorithms **Credits: 4.00**
MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**
or
MATH 300. Linear Algebra **Credits: 3.00 and**
MATH 336. Elementary Differential Equations **Credits: 3.00**
PHYS 344. Advanced Physics Laboratory I **Credits: 1.00**
PHYS 345. Advanced Physics Laboratory II **Credits: 1.00**
PHYS 346. Advanced Physics Laboratory III **Credits: 1.00**
PHYS 360. Analog Electronics **Credits: 4.00**
PHYS 391. Seminar **Credits: 0.00 – 1.00** (PHYS 391 must be taken for 0.00 credit hours)

PHYS 392. Seminar **Credits: 1.00**
PHYS 491. Seminar **Credits: 0.00 – 1.00** (PHYS 491 must be taken for 0.00 credit hours)
PHYS 492. Seminar **Credits: 1.00**

Choose from the following research courses: 2-6 Credit Hours

At least two credits must come from research courses.¹ (All students must take a minimum of 2 credits. Honors students completing the thesis take 6 credits).

PHYS 398. Independent Study in Physics or Astronomy **Credits: 1.00 – 3.00** (PHYS 398 is repeatable to 4 credits)

or

ASTR 398. Independent Study in Physics or Astronomy **Credits: 1.00 – 3.00** (ASTR 398 is repeatable to 4 credits)

PHYS 498R. Undergraduate Research in Physics or Astronomy **Credits: 1.00 – 4.00** (PHYS 498R is repeatable to 6 credits)

or

ASTR 498R. Undergraduate Research in Physics or Astronomy **Credits: 1.00 – 4.00** (ASTR 498R is repeatable to 6 credits)

ISCI 450A. Interscience Research **Credits: 1.00 – 4.00** (ISCI 450A is repeatable to 6 credits)

PHYS 499. Honors **Credits: 1.00 – 3.00**¹ (PHYS 499 is repeatable)

Footnote

¹ Students completing honors theses should take PHYS 499 in both the fall and spring semesters of their senior year for a total of 6 credit hours. Alternatively students could complete their theses over three semesters (spring of junior year, fall and spring of senior year, with two credits of PHYS 499 each semester, for a total of 6 credit hours).

Additional courses approved by the head of the Department of Physics and Astronomy: 9 Credit Hours

Ideally these courses should form a coherent set of courses for the best possible academic experience. See below for some suggestions.

Total: 31-38 Credit Hours

Suggested areas of interest to complete the 9 credit hours required (minimum).

To satisfy the requirement of at least 9 additional credit hours approved by the department head, students are strongly encouraged to select their courses from one of the coherent sets of courses to round out their academic experience. Below are suggested areas of interest.

Applied Nuclear Physics Courses

PHYS 339. Introductory Nuclear Science **Credits: 4.00**
PHYS 460. Quantum Mechanics **Credits: 3.00**
PHYS 333. Introduction to Particle Physics **Credits: 3.00**
PHYS 338. Nuclear Physics **Credits: 3.00**
CHEM 450. Nuclear and Radiation Chemistry **Credits: 3.00**

Biophysics Courses

PHYS 326. Biophysics **Credits: 3.00**
PHYS 364. Introduction to Fluid Mechanics **Credits: 4.00**
PHYS 380. Thermodynamics and Statistical Mechanics **Credits: 3.00**
PHYS 390. Computer Applications in Physics **Credits: 3.00**
BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
BIO 150. Foundations of Biology II **Credits: 3.00 and**
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**
BIO 361. Biochemistry I **Credits: 3.00**
or
CHEM 361. Biochemistry I **Credits: 3.00**
BIO 490. Mechanics of Animal Movement **Credits: 4.00**
CHEM 241. Organic Chemistry I **Credits: 3.00**
CHEM 242. Organic Chemistry II **Credits: 3.00**
CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**

Computational Physics Courses

Students pursuing this area of interest should declare a minor in mathematics.

PHYS 341. Non-Linear Dynamics and Chaos **Credits: 3.00**
PHYS 364. Introduction to Fluid Mechanics **Credits: 4.00**
or
MATH 364. Introduction to Fluid Mechanics **Credits: 4.00**
PHYS 367. Introduction to Acoustics **Credits: 3.00**
or
MATH 367. Introduction to Acoustics **Credits: 3.00**
PHYS 380. Thermodynamics and Statistical Mechanics **Credits: 3.00**
PHYS 390. Computer Applications in Physics **Credits: 3.00**

Electronics and Instrumentation Courses

PHYS 295. Laboratory Apparatus Design and Construction **Credits: 1.00**
PHYS 371. Digital Electronics **Credits: 2.00**
PHYS 372. Microcontrollers and Their Applications (2, 4) **Credits: 2.00**
PHYS 380. Thermodynamics and Statistical Mechanics **Credits: 3.00**
PHYS 386. Robots: Structure and Theory **Credits: 3.00**
PHYS 387. Theory and Basic Principles of Mobile Robot Construction and Control **Credits: 3.00**
PHYS 388. Robots for Humanity **Credits: 3.00**

Geophysics Courses

Any 300- or 400-level GEOL or PHYS course not listed below (with adviser's approval)

PHYS 337. Solid State Physics **Credits: 3.00**
PHYS 381. Materials Characterization (Lecture/Lab) **Credits: 3.00**
PHYS 440. Geophysics (3, 2) **Credits: 4.00**
or
GEOL 440. Geophysics (3, 2) **Credits: 4.00**
ASTR 220. General Astronomy I: The Night Sky, the Solar System and Stars **Credits: 3.00**
GEOL 110. Physical Geology [C3NS] **Credits: 3.00 and**
GEOL 110L. Physical Geology Laboratory [C3L] **Credits: 1.00**
GEOL 210. Applied Physical Geology [C3NS] **Credits: 3.00**
GEOG 215. Introduction to Geographic Information Science and Cartography **Credits: 3.00**

GEOG 216. Earth Observation and GPS **Credits: 3.00**
 GEOL 280. Mineralogy (3, 2) **Credits: 4.00**
 GEOL 300. Introduction to Petrology (3, 3) **Credits: 4.00**
 GEOL 307. Planetary Geology (2, 2) **Credits: 3.00**
 GEOL 365. Structural Geology **Credits: 4.00**
 GEOL 399. Field Geology **Credits: 3.00 - 6.00**
 GEOL 442. Field Geophysics **Credits: 3.00**
 GEOL 460. Hydrogeology (2, 2) **Credits: 3.00**

Materials Physics Courses

PHYS 337. Solid State Physics **Credits: 3.00**
and one of the following:
 PHYS 375. An Introduction to Materials Science **Credits: 3.00**
 or
 CHEM 375. An Introduction to Materials Science **Credits: 3.00**
 or
 MATS 375. An Introduction to Materials Science **Credits: 3.00**
 PHYS 381. Materials Characterization (Lecture/Lab) **Credits: 3.00**
 PHYS 420. Modern Optics **Credits: 3.00**
 PHYS 455. Lasers and Their Applications to Physical Sciences **Credits: 3.00**
 or
 CHEM 455. Lasers and Their Applications to Physical Sciences **Credits: 3.00**
 CHEM 485. Science of the Small **Credits: 4.00**
 or
 PHYS 485. Science of the Small **Credits: 4.00**

Suggested Minors

Students pursuing the Applied Physics Concentration are encouraged to consider the following minors as being particularly effective at augmenting a degree in physics:

Astronomy Minor
 General Business Minor
 Computer Science Minor
 Geophysics Minor
 Materials Science Minor
 Robotics Minor

Writing, Rhetoric and Technical Communication Minor (physics majors in this minor are encouraged to take WRTC 316 and WRTC 350 to fulfill electives)

Fundamental Studies Concentration

The fundamental studies concentration is designed to prepare students for immediate post-baccalaureate employment or for entrance to advanced study in physics or related areas.

Fundamental Studies Concentration Required Courses (in addition to core requirements): 24-25 Credit Hours

CS 149. Introduction to Programming **Credits: 3.00**
 or
 MATH 248. Computers and Numerical Algorithms **Credits: 4.00**
 MATH 300. Linear Algebra **Credits: 3.00**
 MATH 336. Elementary Differential Equations **Credits: 3.00**
 PHYS 344. Advanced Physics Laboratory I **Credits: 1.00**
 PHYS 345. Advanced Physics Laboratory II **Credits: 1.00**

PHYS 346. Advanced Physics Laboratory III **Credits: 1.00**
 PHYS 360. Analog Electronics **Credits: 4.00**
 PHYS 380. Thermodynamics and Statistical Mechanics **Credits: 3.00**
 PHYS 391. Seminar **Credits: 0.00 - 1.00** (*PHYS 391 must be taken for 0.00 credit hours*)
 PHYS 392. Seminar **Credits: 1.00**
 PHYS 460. Quantum Mechanics **Credits: 3.00**
 PHYS 491. Seminar **Credits: 0.00 - 1.00** (*PHYS 491 must be taken for 0.00 credit hours*)
 PHYS 492. Seminar **Credits: 1.00**

Choose among the following electives (if not enrolled in PHYS 499): 3-4 Credit Hours

PHYS 330. Relativity **Credits: 4.00**
 or
 ASTR 330. Relativity **Credits: 4.00**
 ASTR 480. Astrophysics **Credits: 3.00**
 PHYS 333. Introduction to Particle Physics **Credits: 3.00**
 PHYS 337. Solid State Physics **Credits: 3.00**
 PHYS 338. Nuclear Physics **Credits: 3.00**
 PHYS 420. Modern Optics **Credits: 3.00**
 PHYS 482. Advanced Theoretical Physics **Credits: 3.00**

Choose one of the following research courses: 2-6 Credit Hours

Need a minimum of two credit hours of research from this area.¹ (All students must take a minimum of 2 credits. Honors students completing the thesis take 6 credits).

PHYS 398. Independent Study in Physics or Astronomy **Credits: 1.00 - 3.00** (*PHYS 398 is repeatable to 4 credits*)
 or
 ASTR 398. Independent Study in Physics or Astronomy **Credits: 1.00 - 3.00** (*ASTR 398 is repeatable to 4 credits*)
 PHYS 498R. Undergraduate Research in Physics or Astronomy **Credits: 1.00 - 4.00** (*PHYS 498R is repeatable to 6 credits*)
 or
 ASTR 498R. Undergraduate Research in Physics or Astronomy **Credits: 1.00 - 4.00** (*ASTR 498R is repeatable to 6 credits*)
 ISCI 450A. Interscience Research **Credits: 1.00 - 4.00** (*ISCI 450A is repeatable to 6 credits*)
 PHYS 499. Honors **Credits: 1.00 - 3.00**¹ (*PHYS 499 is repeatable*)

Footnote

¹ Students completing honors theses should take PHYS 499 in both the fall and spring semesters of their senior year for a total of 6 credit hours. Alternatively students could complete their theses over three semesters (spring of junior year, fall and spring of senior year, with two credits of PHYS 499 each semester, for a total of 6 credit hours).

Total: 29-35 Credit Hours

Individual Option Concentration

The individual option is a course of studies chosen specifically to match the interest and career plans of the student. This option will allow custom designed cross disciplinary majors such as chemical physics, as well as majors designed for students whose educational and career goals are not met by the existing concentrations in the major.

A student electing the individual option must complete the core requirements for the B.S. in physics and will select a program consisting of a coherent collection of a minimum of 25 additional credits of physics courses numbered above 270, astronomy courses numbered above 301 and courses in related fields.

This individualized program must be selected in consultation with a faculty adviser in the department, and must be approved by that adviser, the department head and one other faculty member in the department. **The student needs to declare this concentration at least three semesters prior to graduation.**

The individualized program, as approved by the department and accepted by the student, becomes the major requirements for that student.

Students are expected to review progress toward completion of the selected program of study with their faculty adviser.

Multidisciplinary Concentrations

The multidisciplinary concentrations are designed to provide a solid foundation in physics for students whose interests extend beyond traditional physics fields. The track of secondary education opens doors to the pursuit of graduate degrees in education and other career paths requiring a technical background. The following are also required for all multidisciplinary concentrations:

Multidisciplinary Concentration Required Courses: 11-13 Credit Hours

MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**

or

MATH 300. Linear Algebra **Credits: 3.00 and**

MATH 336. Elementary Differential Equations **Credits: 3.00**

PHYS 344. Advanced Physics Laboratory I **Credits: 1.00**

PHYS 345. Advanced Physics Laboratory II **Credits: 1.00**

PHYS 380. Thermodynamics and Statistical Mechanics **Credits: 3.00**

PHYS 391. Seminar **Credits: 0.00 - 1.00** (*PHYS 391 must be taken for 0.00 credit hours*)

PHYS 392. Seminar **Credits: 1.00**

PHYS 491. Seminar **Credits: 0.00 - 1.00** (*PHYS 491 must be taken for 0.00 credit hours*)

PHYS 492. Seminar **Credits: 1.00**

Choose from the following research courses: 2-6 Credit Hours

(All students must take a minimum of 2 credits. Honors students completing the thesis take 6 credits).¹

PHYS 398. Independent Study in Physics or Astronomy **Credits: 1.00 - 3.00** (*PHYS 398 is repeatable to 4 credits*)

or

ASTR 398. Independent Study in Physics or Astronomy **Credits: 1.00 - 3.00** (*ASTR 398 is repeatable to 4 credits*)

PHYS 498R. Undergraduate Research in Physics or Astronomy **Credits: 1.00 - 4.00** (*PHYS 498R is repeatable to 6 credits*)

or

ASTR 498R. Undergraduate Research in Physics or Astronomy **Credits: 1.00 - 4.00** (*ASTR 498R is repeatable to 6 credits*)

ISCI 450A. Interscience Research **Credits: 1.00 - 4.00** (*ISCI 450A is repeatable to 6 credits*)

PHYS 499. Honors **Credits: 1.00 - 3.00**¹ (*PHYS 499 is repeatable*)

Footnote

¹ Students completing honors theses should take PHYS 499 in both the fall and spring semesters of their senior year for a total of six credit hours. Alternatively students could complete their theses over three semesters (spring of junior year, fall and spring of senior year, with two credits of PHYS 499 each semester, for a total of 6 credit hours).

Total: 13-19 Credit Hours

Multidisciplinary Astrophysics Concentration

Requirements: 14 Credit Hours

ASTR 220. General Astronomy I: The Night Sky, the Solar System and Stars **Credits: 3.00**

ASTR 221. General Astronomy II: Star Systems, the Interstellar Medium, and Cosmology **Credits: 4.00**

ASTR 320. Astronomical Techniques **Credits: 3.00**

MATH 248. Computers and Numerical Algorithms **Credits: 4.00**

Choose Among the Following Electives (if not enrolled in PHYS 499) 3-4 Credit Hours

ASTR 330. Relativity **Credits: 4.00**

Or

PHYS 330. Relativity **Credits: 4.00**

ASTR 480. Astrophysics **Credits: 3.00**

GEOL 307. Planetary Geology (2, 2) **Credits: 3.00**

PHYS 333. Introduction to Particle Physics **Credits: 3.00**

PHYS 338. Nuclear Physics **Credits: 3.00**

PHYS 420. Modern Optics **Credits: 3.00**

PHYS 460. Quantum Mechanics **Credits: 3.00**

Choose One of the Following Research Courses: 2 - 6 Credit Hours

Need a minimum of two credit hours of research from this area.¹ (All students must take a minimum of 2 credits. Honors students completing the thesis take 6 credits).

ASTR 398. Independent Study in Physics or Astronomy **Credits: 1.00 - 3.00**

Or

PHYS 398. Independent Study in Physics or Astronomy **Credits: 1.00 - 3.00**

ASTR 498R. Undergraduate Research in Physics or Astronomy **Credits: 1.00 - 4.00**

Or

PHYS 498R. Undergraduate Research in Physics or Astronomy **Credits: 1.00 - 4.00**

ISCI 450A. Interscience Research **Credits: 1.00 - 4.00**

PHYS 499. Honors **Credits: 1.00 - 3.00**

Footnote

¹ Students completing honors theses should take PHYS 499 in both the fall and spring semesters of their senior year for a total of 6 credit hours. Alternatively students could complete their theses over three semesters (spring of junior year, fall and spring of senior year, with two credits of PHYS 499 each semester, for a total of 6 credit hours).

Total: 23 - 28 Credit Hours

Multidisciplinary Biophysics Concentration

Requirements (in addition to core required courses): 15-23 Credit Hours

CHEM 132. General Chemistry II **Credits: 3.00**

and

CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

PHYS 326. Biophysics **Credits: 3.00**

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

Complete one of the following options

Option 1:

BIO 150. Foundations of Biology II **Credits: 3.00 and**

BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

BIO 240. Genetics **Credits: 3.00 and**

BIO 240L. Genetics Laboratory **Credits: 1.00**

BIO 370. Animal Physiology **Credits: 4.00**

Option 2:

BIO 150. Foundations of Biology II **Credits: 3.00 and**

BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

BIO 490. Mechanics of Animal Movement **Credits: 4.00**

Option 3:

BIO 445. Neurobiology **Credits: 4.00**

Option 4:

CHEM 241. Organic Chemistry I **Credits: 3.00**

CHEM 242. Organic Chemistry II **Credits: 3.00 and**

CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**

CHEM 361. Biochemistry I **Credits: 3.00**

or

BIO 361. Biochemistry I **Credits: 3.00**

Total: 28-41 Credit Hours

Multidisciplinary Business Concentration

Requirements (in addition to core required courses): 18 Credit Hours

No more than 27 hours may be taken in the College of Business.

ACTG 244. Accounting for Non-Business Majors **Credits: 3.00**

CIS 204. Computer Information Systems Fundamentals for Non-Business Majors

Credits: 3.00

ECON 201. Introduction to Microeconomics **Credits: 3.00**

FIN 345. Finance Fundamentals for Non-Business Majors **Credits: 3.00**

MGT 305. Organizational Behavior and Human Resource Management **Credits: 3.00**

MKTG 380. Principles of Marketing **Credits: 3.00**

Total: 31-37 Credit Hours

Multidisciplinary Geophysics Concentration

Requirements (in addition to core required courses): 21-25 Credit Hours

Choose one of the following: 3 Credit Hours

GEOL 110. Physical Geology [C3NS] **Credits: 3.00**

GEOL 210. Applied Physical Geology [C3NS] **Credits: 3.00**

Choose one of the following: 3-4 Credit Hours

ASTR 220. General Astronomy I: The Night Sky, the Solar System and Stars **Credits: 3.00**

GEOL 307. Planetary Geology (2, 2) **Credits: 3.00**

GEOL 365. Structural Geology **Credits: 4.00**

GEOL 440. Geophysics (3, 2) **Credits: 4.00**

or

PHYS 440. Geophysics (3, 2) **Credits: 4.00**

At least three credits from a field- or geographic-based course: 3-6 Credit Hours

GEOG 215. Introduction to Geographic Information Science and Cartography **Credits: 3.00**

GEOG 216. Earth Observation and GPS **Credits: 3.00**

GEOL 399. Field Geology **Credits: 3.00 - 6.00**

GEOL 442. Field Geophysics **Credits: 3.00**

At least nine credits from the following: 9 Credit Hours

GEOL 280. Mineralogy (3, 2) **Credits: 4.00**

GEOL 300. Introduction to Petrology (3, 3) **Credits: 4.00**

GEOL 460. Hydrogeology (2, 2) **Credits: 3.00**

PHYS 337. Solid State Physics **Credits: 3.00**

PHYS 360. Analog Electronics **Credits: 4.00**

PHYS 381. Materials Characterization (Lecture/Lab) **Credits: 3.00**

Any other 300- or 400-level geology or physics course (Upon approval from adviser): 3 Credit Hours

Total: 34-44 Credit Hours

Multidisciplinary Technical and Scientific Communication (TSC) Concentration

Requirements (in addition to core required courses): 24 Credit Hours

ASTR 480. Astrophysics **Credits: 3.00**
WRTC 300. Professional Editing **Credits: 3.00**
WRTC 318. Intercultural Professional Communication **Credits: 3.00**
WRTC 350. Foundations of Technical Communication **Credits: 3.00**

Choose Six Credits: 6 Credit Hours

Physics courses numbered above 300

Choose Six Credits: 6 Credit Hours

WRTC 301. Language, Law and Ethics **Credits: 3.00**
WRTC 318. Intercultural Professional Communication **Credits: 3.00**
WRTC 458. Scientific and Medical Communication **Credits: 3.00**
Other upper-level courses with permission

Total: 37-43 Credit Hours

Physics and Engineering Combined Program Concentration

This dual degree program makes it possible for the student to earn a B.S. degree in physics from JMU and a Master of Engineering degree from the University of Virginia. The engineering areas available under this program include biomedical, environmental, transportation, materials science, systems engineering and engineering physics.

During the first three years at JMU, the student must complete 96 credit hours including all JMU General Education requirements, the physics core requirements, MATH 248 or CS 149, and at least eight additional credit hours in physics courses designated by the JMU Department of Physics and Astronomy with a minimum grade average of "B+." In general, these eight additional hours will be chosen from those recommended for the applied physics concentration, but substitutions may be approved by the program adviser, Sean Scully. During the fourth year of study (when the student will be in residence at the University of Virginia), the student will take further courses approved by the JMU Department of Physics and Astronomy for credit toward the Bachelor of Science degree in physics. A total of 24 credit hours of physics or other physics-related courses taken at either school will be required for the JMU Bachelor of Science degree in physics. For further information, consult the head of the Department of Physics and Astronomy.

Additional Upper Level Courses (required for the combined program): 5-6 Credit Hours

CS 149. Introduction to Programming **Credits: 3.00**
or
MATH 248. Computers and Numerical Algorithms **Credits: 4.00**
PHYS 344. Advanced Physics Laboratory I **Credits: 1.00**
PHYS 345. Advanced Physics Laboratory II **Credits: 1.00**

Recommended Schedule for Majors

First Year

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
CHEM 132. General Chemistry II **Credits: 3.00**
CHEM 132L. General Chemistry Laboratory **Credits: 1.00**
MATH 235. Calculus I [C3QR] **Credits: 4.00**
MATH 236. Calculus II **Credits: 4.00**
PHYS 105. Foundations of Physics **Credits: 1.00**
General Education courses **Credits: 9.00**

Choose one of the following pairs of courses: 6 Credit Hours

PHYS 140. College Physics I [C3PP] **Credits: 3.00 and**
PHYS 150. College Physics II **Credits: 3.00**
or
PHYS 240. University Physics I [C3PP] **Credits: 3.00 and**
PHYS 250. University Physics II **Credits: 3.00**

Choose one of the following pairs of laboratory courses: 2 Credit Hours

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00 and**
PHYS 150L. General Physics Laboratory **Credits: 1.00**
or
PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00 and**
PHYS 250L. University Physics Laboratory II **Credits: 1.00**

Total: 34 Credit Hours

Second Year

Applied Physics, Multidisciplinary, and Physics and Engineering Combined Program Concentrations

MATH 237. Calculus III **Credits: 4.00**
MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**
or
MATH 300. Linear Algebra **Credits: 3.00 and**
MATH 336. Elementary Differential Equations **Credits: 3.00**
PHYS 247. Data Acquisition and Analysis Techniques II **Credits: 1.00**
PHYS 260. University Physics III **Credits: 3.00**
PHYS 270. Modern Physics **Credits: 3.00 and**
PHYS 270L. Modern Physics Laboratory **Credits: 1.00**
CS 149. Introduction to Programming **Credits: 3.00**
or
MATH 248. Computers and Numerical Algorithms **Credits: 4.00**
General Education courses **Credits: 11.00 -15.00**

Total: 30-37 Credit Hours

Fundamental Studies Second Year

CS 149. Introduction to Programming **Credits: 3.00**
MATH 237. Calculus III **Credits: 4.00**

MATH 300. Linear Algebra **Credits: 3.00**
MATH 336. Elementary Differential Equations **Credits: 3.00**
PHYS 247. Data Acquisition and Analysis Techniques II **Credits: 1.00**
PHYS 260. University Physics III **Credits: 3.00**
PHYS 270. Modern Physics **Credits: 3.00 and**
PHYS 270L. Modern Physics Laboratory **Credits: 1.00**
General Education courses **Credits: 11.00 -15.00**

Total: 32-36 Credit Hours

Individual Option Second Year

MATH 237. Calculus III **Credits: 4.00**
MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**
or
MATH 300. Linear Algebra **Credits: 3.00 and**
MATH 336. Elementary Differential Equations **Credits: 3.00**
MATH 248. Computers and Numerical Algorithms **Credits: 4.00**
PHYS 247. Data Acquisition and Analysis Techniques II **Credits: 1.00**
PHYS 260. University Physics III **Credits: 3.00**
PHYS 270. Modern Physics **Credits: 3.00 and**
PHYS 270L. Modern Physics Laboratory **Credits: 1.00**
General Education courses **Credits: 11.00 -15.00**

Total: 31-37 Credit Hours

Third and Fourth Years

During their junior and senior years, students will select courses to complete the specific program concentration which they are following. These course selections will be made with the assistance of a faculty adviser.

Program Total: 120 Credit Hours

Astronomy Minor

Minor Requirements

The minimum requirement for a minor in astronomy is 21 credit hours selected as follows:

Astronomy Minor Electives

ASTR 220. General Astronomy I: The Night Sky, the Solar System and Stars **Credits: 3.00**
ASTR 221. General Astronomy II: Star Systems, the Interstellar Medium, and Cosmology **Credits: 4.00**
ASTR 320. Astronomical Techniques **Credits: 3.00**

Choose one of the following: 6 Credit Hours

PHYS 140. College Physics I [C3PP] **Credits: 3.00 and**
PHYS 150. College Physics II **Credits: 3.00**

PHYS 240. University Physics I [C3PP] **Credits: 3.00 and**

PHYS 250. University Physics II **Credits: 3.00**

Choose one of the following: 2 Credit Hours

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00 and**
PHYS 150L. General Physics Laboratory **Credits: 1.00**
or
PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00 and**
PHYS 250L. University Physics Laboratory II **Credits: 1.00**

One course selected from the following: 3 Credit Hours

GEOL 307. Planetary Geology (2, 2) **Credits: 3.00**
ASTR 480. Astrophysics **Credits: 3.00**
ASTR 297. Topics in Astronomy **Credits: 1.00 - 4.00** or
(Appropriate topics could include the relativity, cosmology, cosmic rays or other astronomy-related topics with approval of minor adviser.)
PHYS 297. Topics in Physics **Credits: 1.00 - 4.00** or
(Appropriate topics could include the relativity, cosmology, cosmic rays or other astronomy-related topics with approval of minor adviser.)
PHYS 397. Topics in Physics **Credits: 1.00 - 4.00** or
(Appropriate topics could include the relativity, cosmology, cosmic rays or other astronomy-related topics with approval of minor adviser.)
PHYS 497. Topics in Physics **Credits: 1.00 - 4.00**
(Appropriate topics could include the relativity, cosmology, cosmic rays or other astronomy-related topics with approval of minor adviser.)
ASTR 330. Relativity **Credits: 4.00** or
PHYS 330. Relativity **Credits: 4.00**

Total: 21 Credit Hours

Physics Minor

Minor Requirements

The minimum requirement for a minor in physics is 21 credit hours selected as follows:

Physics Minor Electives

PHYS 260. University Physics III **Credits: 3.00**

Choose one of the following: 6 Credit Hours

PHYS 140. College Physics I [C3PP] **Credits: 3.00 and**
PHYS 150. College Physics II **Credits: 3.00**
or
PHYS 240. University Physics I [C3PP] **Credits: 3.00 and**
PHYS 250. University Physics II **Credits: 3.00**

Choose one of the following: 2 Credit Hours

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00 and**
PHYS 150L. General Physics Laboratory **Credits: 1.00**

or
PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00** and
PHYS 250L. University Physics Laboratory II **Credits: 1.00**

Ten credits selected from the following: 10 Credit Hours

Physics courses numbered above 260
ASTR 320. Astronomical Techniques **Credits: 3.00**
ASTR 480. Astrophysics **Credits: 3.00**

Total: 21 Credit Hours

Physics Minor for Engineers

Ioana Niculescu, **Coordinator**
Phone: (540) 568-2980
Email: niculemi@jmu.edu

The minor in physics for engineering students is a program that enables JMU undergraduate students majoring in engineering to take a minor in physics. Interested students will take courses in upper-level physics to explore physical phenomena related to their professional development as an engineer.

Physics Minor for Engineers Electives

PHYS 270. Modern Physics **Credits: 3.00** and
PHYS 270L. Modern Physics Laboratory **Credits: 1.00**
PHYS course at the 300-level or above ¹

Choose one of the following: 6 Credit Hours

PHYS 140. College Physics I [C3PP] **Credits: 3.00** and
PHYS 150. College Physics II **Credits: 3.00**
or
PHYS 240. University Physics I [C3PP] **Credits: 3.00** and
PHYS 250. University Physics II **Credits: 3.00**

Choose one of the following: 2 Credit Hours

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00** and
PHYS 150L. General Physics Laboratory **Credits: 1.00**
or
PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00** and
PHYS 250L. University Physics Laboratory II **Credits: 1.00**

Choose one of the following: 4 Credit Hours

ENGR 313. Circuits and Instrumentation **Credits: 4.00**
PHYS 360. Analog Electronics **Credits: 4.00**

Total: 19-20 Credit Hours

Footnote

¹ May not include PHYS 360

Department of Political Science

Kerry Crawford, **Department Head**
Phone: (540) 568-6952
Email: crawfokf@jmu.edu
Location: Miller Hall, Room 2123
Website: <http://www.jmu.edu/polisci>

Professors

M. Adams, J. Adolino, C. Blake, B. Blackstone, A. Broscheid, J. Byrne, M. Cohen, K. Ferraiolo, S. Hammond, J. Hulsey, M. Jamal, D. Jones, B. Kausler, J. Keller, T. LaPira, H. Lee, H. Lubert, E. Oldmixon, L. Peaslee, R. Roberts, K. Rutherford, J. Scherpereel, V. Sulfaro, A. Teye, Y. Yang

Associate Professors

R. Alexander, K. Crawford, A. Goldberg, K. Grant, F. Mayhew, N. Swartz, J. Taylor, K. Wylie

Assistant Professors

S. Muzata, J. Swift

Mission Statement

The Department of Political Science offers strong major and minor programs sharing a focus on public concerns. We are committed to providing our students with the tools and competence to succeed in their lives, their graduate education and their careers by instilling academic rigor, information access and research skills, dedication to life-long learning and respect for diversity in cultures, nations and institutions of democracy.

Goals

To carry out the above mission, the Department of Political Science seeks to:

- Offer strong major programs: the B.A. in political science, the B.S. in public policy and administration and the B.A. in international affairs (cross disciplinary).
- Offer strong minor programs: political science, public policy & administration and political communication (cross disciplinary).
- Enhance critical thinking, communication and information gathering skills.
- Foster active learning through research, simulations and internships.

Career Opportunities

The political science department offers programs that lead students to careers in the following fields:

- Administration and management
- Federal, state and local government
- International organizations
- Law
- Not-for-profit organizations
- Politics

- Private sector

To enhance the marketability of its students, the political science department supports career-related internships. For information contact the political science office, Miller Hall, Room 2120, (540)568-6149 or contact the internship coordinator, Rob Alexander (alexanrw@jmu.edu).

Co-curricular Activities and Organizations

- Pi Alpha Alpha: public administration honor society
- Pi Sigma Alpha: political science honor society
- Pre-Law Society
- Sigma Iota Rho: international affairs honor society
- PASO: JMU Public Affairs Student Organization

Majors in the Department of Political Science

The Department of Political Science offers the B. A. degree with a major in political science, the B.S. degree with a major in public administration and the B.A. degree with a major in international affairs.

Washington Semester

Website: <https://www.jmu.edu/polisci/washington.shtml>

David Jones, **Program Director**

Phone: (202) 422-6161

Email: jones3da@jmu.edu

Location: 1400 16th St. NW, Suite 320, Washington, D.C., 20036

Website: <https://www.jmu.edu/polisci/washington.shtml>

The Washington Semester program enables students to explore the wealth of political and cultural opportunities available in the Washington, D.C. area. The program includes semester-length internships, courses taught on-site, panel discussions by people in various professions, cultural activities, and networking opportunities with JMU alumni working in the DC area.

The Washington Semester program is open to all majors and is offered every semester. Students not majoring in political science, international affairs, or public administration should consult with their departments about how the internship and coursework fits their academic plans; some departments may be willing to arrange course substitutions.

Political Science, B.A.

Program Description

Majors in the Department of Political Science

The Department of Political Science offers the B. A. degree with a major in political science, the B.S. degree with a major in public policy and administration and the B.A. degree with a major in international affairs.

Coordinator: Scott Hammond

Location: Miller Hall, Room 2127

Email: hammonsj@jmu.edu

Phone: (540) 568-6313

For a major in political science, the student must satisfactorily complete a minimum of 39 credit hours, including:

- A 17-hour core introducing students to the conduct of political inquiry in the major areas of the discipline, an awareness of global issues and cultural diversity, and the techniques of original research.
- An 18-hour depth requirement in which students take at least one course from three of the major areas of political inquiry and acquire additional experience in the application of research techniques.
- A four-hour capstone experience designed to bring together knowledge gained in different courses into a coherent whole, to foster a capacity for lifelong learning, to connect the major to experiences outside the university and to provide the opportunity to work individually with a faculty member.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
University electives	23-38
Major requirements (listed below)	38-39
Total	120

Footnotes

- ¹ The General Education program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within the major.
- ² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Language's placement test.

Major Requirements

Core Requirements: 17 Credit Hours

- POSC 225. U.S. Government [C4AE] **Credits: 4.00**
- POSC 201. Introduction to Western Political Theory **Credits: 3.00**
- POSC 295. Research Methods **Credits: 4.00** ¹
- POSC 230. International Relations **Credits: 3.00**
- POSC 240. Comparative Politics **Credits: 3.00**

Footnote

- ¹ MATH 220, POSC 225 and one of the following: POSC 230, POSC 240, PPA 200, or PPA 265 are prerequisites for POSC 295.

Electives

- In addition to the core requirements, political science majors must elect 18 hours of approved courses as shown, including at least one upper-level course from each of the four major areas of political inquiry.
- Students are encouraged to complete the core requirements before taking

elective courses. A political science major may seek permission to count a completed Senior Honors Project as a three-credit elective within the major. Students must consult with the political science program coordinator prior to conducting an honors project to clarify the specific nature of its potential applicability to the major's elective options.

Elective Courses

Choose one course from each of the four areas: 12 Credit Hours

Comparative Politics

- POSC 340. Politics of Development **Credits: 3.00**
 POSC 341. Social Movements in the U.S. and Abroad **Credits: 3.00**
 POSC 344. Politics of the European Union **Credits: 3.00**
 POSC 345. Politics of Western Europe **Credits: 3.00**
 POSC 346. Politics of Central and Eastern Europe **Credits: 3.00**
 POSC 347. Comparative Public Policy **Credits: 3.00**
 POSC 348. The Politics of Cultural Pluralism **Credits: 3.00**
 POSC 350. Latin American Politics **Credits: 3.00**
 POSC 353. African Politics **Credits: 3.00**
 POSC 354. Politics of the Middle East **Credits: 3.00**
 POSC 355. East Asian Politics **Credits: 3.00**
 POSC 356. Politics of China **Credits: 3.00**
 POSC 371. Topics in Comparative Politics **Credits: 3.00**
 POSC 377. Global Black Feminist Politics: On Power, Resistance and Transformation **Credits: 3.00**
- POSC 383. Women and Politics in Comparative Perspective **Credits: 3.00**
 or
 WGSS 383. Women and Politics in Comparative Perspective **Credits: 3.00**
 POSC 440. Post-Conflict Societies **Credits: 3.00**
 POSC 457. Fates of Empires **Credits: 3.00**
 or
 HIST 357. Fates of Empires **Credits: 3.00**

International Relations

- POSC 331. Human Rights in Theory and Practice **Credits: 3.00**
 or
 JUST 331. Human Rights in Theory and Practice **Credits: 3.00**
 POSC 361. Topics in International Relations **Credits: 3.00**
 POSC 370. U.S. Foreign Policy **Credits: 3.00**
 POSC 372. Ethics and International Politics **Credits: 3.00**
 or
 JUST 372. Ethics and International Politics **Credits: 3.00**
 POSC 379. International Laws of War **Credits: 3.00**
 POSC 392. Peace Studies **Credits: 3.00**
 or
 JUST 392. Peace Studies **Credits: 3.00**
 POSC 393. Human Security **Credits: 3.00**
 POSC 394. International Conflict **Credits: 3.00**
 POSC 395. International Law **Credits: 3.00**
 POSC 396. International Organizations **Credits: 3.00**
 POSC 397. The Politics of International Economic Relations **Credits: 3.00**
 POSC 430. International Security and Conflict Management **Credits: 3.00**
 POSC 435. International Terrorism **Credits: 3.00**
 POSC 458. International Political Analysis **Credits: 3.00**

Political Theory

- POSC 310. Ancient Political Theory: Classical Greek Political Philosophy to Roman Stoicism **Credits: 3.00**
 POSC 311. The Ideas and Legacies of Medieval and Renaissance Political Theory **Credits: 3.00**
 POSC 315. Political Theory: Early Modern to the 19th Century **Credits: 3.00**
 POSC 316. Contemporary Political Theory **Credits: 3.00**
 POSC 321. Political Theory and Ideology **Credits: 3.00**
 POSC 330. American Political Thought **Credits: 3.00**
 POSC 332. African American Political Thought **Credits: 3.00**
 POSC 333. American Political Thought II: Civil War to the Present **Credits: 3.00**
 POSC 334. Political Thought of James Madison **Credits: 3.00**
 POSC 381. Topics in Political Theory **Credits: 3.00**

American Government

- POSC 302. State & Local Gov **Credits: 3.00**
 POSC 325. Constitutional Law **Credits: 3.00**
 POSC 326. Civil Rights **Credits: 3.00**
 POSC 351. Topics in American Politics **Credits: 3.00**
 POSC 362. Political Behavior **Credits: 3.00**
 POSC 364. Political Parties in America **Credits: 3.00**
 POSC 365. American Political Campaigning **Credits: 3.00**
 POSC 366. Introduction to the Politics of Race and Ethnicity **Credits: 3.00**
 POSC 367. U.S. Immigration and Refugee Law **Credits: 3.00**
 POSC 368. Interest Groups, Lobbying and Public Policy **Credits: 3.00**
 POSC 369. Elections and Voting Behavior **Credits: 3.00**
 POSC 375. Latina/o/x Politics: Origins and Futures **Credits: 3.00**
 POSC 376. Introduction to Black Politics **Credits: 3.00**
 POSC 378. Borderlands Policy: Latina/o/x Politics in Context **Credits: 3.00**
 POSC 380. The U.S. Presidency **Credits: 3.00**
 POSC 382. The Role of Religion in American Politics **Credits: 3.00**
 POSC 384. Minority Group Politics **Credits: 3.00**
 POSC 385. The U.S. Congress **Credits: 3.00**
 POSC 386. The U.S. Judiciary **Credits: 3.00**
 POSC 387. The Appellate Process and Practice **Credits: 3.00**
 POSC 472. Media and Politics **Credits: 3.00**

Two additional electives chosen from the 300 or 400 level: 6 Credit Hours

For three of these six credit hours, students may also take one of the following courses:

- POSC 200. Global Politics [C4GE] **Credits: 3.00**
 POSC 300. Politics and Film **Credits: 3.00**
 POSC 301W. The Washington Semester Experience **Credits: 3.00**
 POSC 391. Topics in Public Policy **Credits: 3.00**
 POSC 398. Simulations **Credits: 3.00**
 POSC 493. Political Communication Internship **Credits: 4.00**
 POSC 493W. Political Communication Internship in Washington **Credits: 6.00**
 POSC 495. Internship in Political Science **Credits: 4.00**
 POSC 495W. Washington Semester Internship in Political Science **Credits: 6.00**
 PPA 200. Introduction to Public Policy **Credits: 3.00**
 PPA 265. Public Administration **Credits: 3.00**

Major Requirements Total: 38-39 Credit Hours

Senior Capstone: 3-4 Credit Hours

Students should fulfill the senior capstone requirement for each major and minor separately. This means that senior experiences completed for one major or minor cannot normally be counted for another. Students who have questions about a particular situation should see the academic unit head or appropriate academic unit coordinator for clarification.

POSC 492. Senior Seminar in Political Science **Credits: 3.00-4.00** ²

Footnote

² This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

Program Total: 120 Credit Hours

Political Science Minor

A student may minor in political science by completing 19 credit hours of approved courses from the following list. Check with the department office for department availability of the minor.

Courses

POSC 201. Introduction to Western Political Theory **Credits: 3.00**

POSC 225. U.S. Government [C4AE] **Credits: 4.00**

Choose one upper-level American government course: 3 Credit Hours

POSC 300. Politics and Film **Credits: 3.00**

POSC 301W. The Washington Semester Experience **Credits: 3.00**

POSC 302. State & Local Gov **Credits: 3.00**

POSC 325. Constitutional Law **Credits: 3.00**

POSC 326. Civil Rights **Credits: 3.00**

POSC 351. Topics in American Politics **Credits: 3.00**

POSC 362. Political Behavior **Credits: 3.00**

POSC 364. Political Parties in America **Credits: 3.00**

POSC 365. American Political Campaigning **Credits: 3.00**

POSC 367. U.S. Immigration and Refugee Law **Credits: 3.00**

POSC 368. Interest Groups, Lobbying and Public Policy **Credits: 3.00**

POSC 369. Elections and Voting Behavior **Credits: 3.00**

POSC 380. The U.S. Presidency **Credits: 3.00**

POSC 382. The Role of Religion in American Politics **Credits: 3.00**

POSC 384. Minority Group Politics **Credits: 3.00**

POSC 385. The U.S. Congress **Credits: 3.00**

POSC 386. The U.S. Judiciary **Credits: 3.00**

POSC 387. The Appellate Process and Practice **Credits: 3.00**

POSC 472. Media and Politics **Credits: 3.00**

or

SCOM 472. Media and Politics **Credits: 3.00**

or

SMAD 472. Media and Politics **Credits: 3.00**

Elective chosen from 300 level courses listed above or from the following: 3 Credit Hours

PPA 200. Introduction to Public Policy **Credits: 3.00**

PPA 265. Public Administration **Credits: 3.00**

POSC 200. Global Politics [C4GE] **Credits: 3.00**

POSC 310. Ancient Political Theory: Classical Greek Political Philosophy to Roman Stoicism **Credits: 3.00**

POSC 315. Political Theory: Early Modern to the 19th Century **Credits: 3.00**

POSC 316. Contemporary Political Theory **Credits: 3.00**

POSC 321. Political Theory and Ideology **Credits: 3.00**

POSC 330. American Political Thought **Credits: 3.00**

POSC 333. American Political Thought II: Civil War to the Present **Credits: 3.00**

POSC 334. Political Thought of James Madison **Credits: 3.00**

POSC 381. Topics in Political Theory **Credits: 3.00**

POSC 391. Topics in Public Policy **Credits: 3.00**

Choose Option One or Option Two: 6 Credit Hours

Option One:

POSC 230. International Relations **Credits: 3.00**

Choose one of the following:

POSC 331. Human Rights in Theory and Practice **Credits: 3.00**

or

JUST 331. Human Rights in Theory and Practice **Credits: 3.00**

POSC 361. Topics in International Relations **Credits: 3.00**

POSC 370. U.S. Foreign Policy **Credits: 3.00**

POSC 372. Ethics and International Politics **Credits: 3.00**

or

JUST 372. Ethics and International Politics **Credits: 3.00**

POSC 392. Peace Studies **Credits: 3.00**

or

JUST 392. Peace Studies **Credits: 3.00**

POSC 393. Human Security **Credits: 3.00**

POSC 395. International Law **Credits: 3.00**

POSC 396. International Organizations **Credits: 3.00**

POSC 397. The Politics of International Economic Relations **Credits: 3.00**

POSC 430. International Security and Conflict Management **Credits: 3.00**

POSC 435. International Terrorism **Credits: 3.00**

POSC 458. International Political Analysis **Credits: 3.00**

Option Two:

POSC 240. Comparative Politics **Credits: 3.00**

Choose one of the following:

POSC 340. Politics of Development **Credits: 3.00**

POSC 341. Social Movements in the U.S. and Abroad **Credits: 3.00**

POSC 344. Politics of the European Union **Credits: 3.00**

POSC 345. Politics of Western Europe **Credits: 3.00**

POSC 346. Politics of Central and Eastern Europe **Credits: 3.00**

POSC 347. Comparative Public Policy **Credits: 3.00**

POSC 348. The Politics of Cultural Pluralism **Credits: 3.00**

POSC 350. Latin American Politics **Credits: 3.00**

POSC 353. African Politics **Credits: 3.00**

POSC 354. Politics of the Middle East **Credits: 3.00**

POSC 355. East Asian Politics **Credits: 3.00**

POSC 356. Politics of China **Credits: 3.00**

POSC 371. Topics in Comparative Politics **Credits: 3.00**

POSC 383. Women and Politics in Comparative Perspective **Credits: 3.00**

or

WGSS 383. Women and Politics in Comparative Perspective **Credits: 3.00**

POSC 440. Post-Conflict Societies **Credits: 3.00**

Total: 19 Credit Hours

Public Policy and Administration Minor

The minor in public policy and administration seeks to give students a foundation in the nature and practice of public policy and public administration. Students get exposure to the application of policy and administration by doing an internship capstone course. The minor in public policy and administration requires 20 credit hours of course work.

Courses

POSC 225. U.S. Government [C4AE] **Credits: 4.00**

PPA 200. Introduction to Public Policy **Credits: 3.00**

PPA 265. Public Administration **Credits: 3.00**

Public Policy: 3 Credit Hours

Choose one:

POSC 347. Comparative Public Policy **Credits: 3.00**

POSC 367. U.S. Immigration and Refugee Law **Credits: 3.00**

POSC 391. Topics in Public Policy **Credits: 3.00**

PPA 460. Regionalism and Urban Management **Credits: 3.00**

PPA 461. Education and Social Policy **Credits: 3.00**

PPA 462. Social Welfare and Local Government Policy **Credits: 3.00**

PPA 482. Special Topics in Public Policy **Credits: 3.00**

PPA 484. Environmental Regulatory Policy and Politics **Credits: 3.00**

Public Administration: 3 Credit Hours

Choose one of the following:

MGT 365. Fundamentals of Human Resource Management **Credits: 3.00**

PPA 381. Budgetary Process **Credits: 3.00**

PPA 415. Legal Environment of Public Administration **Credits: 3.00**

PPA 469. Philanthropy and Volunteerism **Credits: 3.00**

PPA 470. Nonprofit Management and Leadership **Credits: 3.00**

PPA 471. Financial Management for Nonprofit Organizations **Credits: 3.00**

PPA 472. Contract Management **Credits: 3.00**

PPA 473. Economic and Community Development **Credits: 3.00**

PPA 475. Grant Writing and Project Management **Credits: 3.00**

PPA 483. Special Topics in Public Management **Credits: 3.00**

Required Capstone: 4 Credit Hours

Choose one of the following:

PPA 494. Internship in Public Policy **Credits: 4.00**

PPA 496. Internship in Public Management **Credits: 4.00**

PPA 496W. Public Management Internship in Washington **Credits: 6.00**

Total: 20 Credit Hours

International Affairs, B.A.

Program Description

The major in international affairs provides an interdisciplinary understanding of foreign cultures and societies, the dynamics of world politics, and other nations' world views and their consequent actions. A liberal arts program (B.A. degree), the international affairs major combines interdisciplinary, intercultural and multilingual education. The courses for these concentrations stem from a broad variety of traditional liberal studies disciplines. The major also allows students to incorporate a minor in African, African American, & Diaspora (AAAD) Studies; Asian Studies; Latin American, Latinx, & Caribbean Studies; Middle Eastern Communities and Migrations; or Russian Studies. The international affairs major facilitates (but does not require) participation in Study Abroad programs. Because of limited course offerings, certain specializations may require language training from another university.

International affairs is a 50-credit hour major, with a 32-credit common core and 18 credits of concentration study. For further information and a complete list of the distribution requirements and eligible courses, contact the coordinator.

All INTA majors must declare a concentration. There are 3 global concentrations and 5 regional concentrations.

The three thematic, global concentrations are:

- International Conflict and Security
- Global Human Development
- Foreign Policy and Global Governance

Each of the other five concentration options focuses on a geographic region, but does so in global perspective:

- Africa
- Asia

- Europe
- Latin America
- Middle East

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses) ³	3
University electives	12-26
Major requirements (listed below)	50
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232), or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures' placement test. The international affairs major requires an additional year of language study. That is, students must have three years of a foreign language appropriate to their course of study in the major. Students majoring in international affairs who use proficiency in a native language to meet the INTA language requirement must make the following substitutions for the two 300-level foreign language courses: AMST 200 and one of the following courses: HIST 225, ENG 247 or ENG 248. Such students who have a diploma from a U.S. high school may take six credits of any foreign language, at any level, instead of the above two courses. These courses must focus on grammar, oral and written communication; they cannot be literature, cinema or civilization courses.

³ If students have taken a PHIL course to meet their General Education requirements, they must take an additional course to meet the B.A. degree philosophy requirement. PHIL 120 and PHIL 150 cannot be used to fulfill the B.A. philosophy requirement.

Major Requirements

Students may choose one of eight concentrations: comparative study focusing on either Africa, Asia, Europe, Latin America or the Middle East; foreign policy and global governance; global human development; or international security and conflict. The international affairs major requires that all students complete a common core. Students should be aware that it is not always possible to offer courses on their regular rotation and that new courses may be added and existing ones deleted. Therefore, key requirements should not be left until just before graduation. Any course substitutions must be approved by the international affairs coordinator in consultation with other faculty members.

Core Courses: 29 Credit Hours

ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**

ECON 201. Introduction to Microeconomics **Credits: 3.00**

ECON 270. International Economics **Credits: 3.00**

INTA 295. CrossNational Research Skills **Credits: 4.00**

INTA 489. Senior Seminar in International Affairs **Credits: 3.00-4.00**

POSC 230. International Relations **Credits: 3.00**

POSC 240. Comparative Politics **Credits: 3.00**

Grammar and Communication Foreign Language Course (*Numbered 320*) **Credits: 3.00** ⁴

Oral and Written Communication Foreign Language Course (*Numbered 320*) **Credits: 3.00** ⁴

Choose one of the following: 3 Credit Hours

POSC 370. U.S. Foreign Policy **Credits: 3.00** ⁴

Major Requirements Total: 32 Credit Hours

Footnotes

¹ Students should complete these core economics requirements before enrolling in upper-level economics courses. Students double-majoring in economics and international affairs may substitute ECON 370 for ECON 270 to meet their core requirement.

² Students should note that MATH 220 is a prerequisite for INTA 295. If taken in the summer from an INTA faculty member, POSC 295 will count as INTA 295.

³ This course fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisites:** *Completion of all courses in the core requirement of the major and senior standing.*

⁴ Students must be proficient at the third-year level of a foreign language. In most languages this will require the completion of courses numbered 300 and 320. Some languages may not use this course numbering. In this instance, students must take two 300-level courses that focus on grammar, oral and written communication. The second 300-level course may not be a literature, cinema or civilization course. Some languages cannot be completed through the 300 level at JMU. Students studying these languages may have to complete course work during the summer or abroad at a specialized language program. Students should consult with the Department of Foreign Languages, Literatures and Cultures on this point. Each student's foreign language must be appropriate for their track. French is acceptable for the Africa and Middle East tracks.

Concentrations

Foreign Policy and Global Governance Concentration

Coordinator: Keith Grant

Location: Miller Hall, Room 2167

Email: grantka@jmu.edu

Phone: (540) 568-4336

Political Dynamics of Foreign Policy and Global Governance: 3 Credit Hours

Choose one of the following:

POSC 395. International Law **Credits: 3.00**

POSC 396. International Organizations **Credits: 3.00**

POSC 458. International Political Analysis **Credits: 3.00**

Historical Patterns: 3 Credit Hours

Choose one course from the following:

Africa

HIST 263. Africa **Credits: 3.00**

HIST 470. Modern Africa **Credits: 3.00**

Asia

HIST 274. Modern East Asia **Credits: 3.00**

HIST 371. India **Credits: 3.00**

HIST 377. History of Korea **Credits: 3.00**

HIST 378. China in the Modern World **Credits: 3.00**

Europe

HIST 309. French History Since 1648 **Credits: 3.00**

HIST 321. Gender and Sexuality in Modern Europe **Credits: 3.00**

HIST 386. The Soviet Union: A Socialist Experiment **Credits: 3.00**

HIST 398. European Military History **Credits: 3.00**

HIST 475. Modern Russia **Credits: 3.00**

HIST 478. Eastern Europe **Credits: 3.00**

HIST 486. Europe Since 1914 **Credits: 3.00**

Latin America

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (*When topic is Latin American Cultures*)

HIST 368. Blurred Borders: A Cultural History of the Caribbean, Latin America and the United States **Credits: 3.00**

ANTH 436. Afro-Latin America **Credits: 3.00**

or

HIST 436. Afro-Latin America **Credits: 3.00**

HIST 444. Revolution and Social Change in Latin America **Credits: 3.00**

HIST 447. South America **Credits: 3.00**

HIST 448. Gender in Latin America and the Iberian World **Credits: 3.00**

The Middle East

HIST 373. History of the Ottoman Empire, 1453-1922 **Credits: 3.00**

HIST 473. Early Modern Islamic Empires **Credits: 3.00**

HIST 485. Imperial Science and Colonial Knowledge in the Middle East and South Asia **Credits: 3.00**

Regional and Cross Regional Sociopolitical Dynamics: 3 Credit Hours

Choose one course from the following:

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**

ECON 312. Comparative Economic Systems **Credits: 3.00**

GEOG 280. Human Geography: The Cultural Landscape **Credits: 3.00**

GEOG 380. Cultural Geography **Credits: 3.00**

POSC 200. Global Politics [C4GE] **Credits: 3.00**

POSC 340. Politics of Development **Credits: 3.00**

POSC 344. Politics of the European Union **Credits: 3.00**

POSC 345. Politics of Western Europe **Credits: 3.00**

POSC 346. Politics of Central and Eastern Europe **Credits: 3.00**

POSC 350. Latin American Politics **Credits: 3.00**

POSC 354. Politics of the Middle East **Credits: 3.00**

POSC 355. East Asian Politics **Credits: 3.00**

POSC 356. Politics of China **Credits: 3.00**

POSC 371. Topics in Comparative Politics **Credits: 3.00**

SOCI 348. Introduction to Developing Societies **Credits: 3.00**

Depth Component: 9 Credit Hours

Choose three courses from the following, from at least two disciplines. At least one course must be in a discipline other than history or political science.

Economics

ECON 365. Economic Development **Credits: 3.00**

ECON 370. International Trade and Trade Policies **Credits: 3.00**

ECON 372. International Finance and Payments **Credits: 3.00**

or

FIN 372. International Finance and Payments **Credits: 3.00**

Communication

SCOM 248. Intercultural Communication **Credits: 3.00**

Culture

Geography

GEOG 300. Population Geography **Credits: 3.00**

GEOG 325. Environmental Ethics **Credits: 3.00**

GEOG 344. Globalization and Development **Credits: 3.00**

GEOG 345. Geography of Poverty **Credits: 3.00**

GEOG 375. Political Geography **Credits: 3.00**

History

HIST 469. A History of International Development in the Twentieth Century **Credits: 3.00**

Justice Studies

JUST 331. Human Rights in Theory and Practice **Credits: 3.00**

or

POSC 331. Human Rights in Theory and Practice **Credits: 3.00**

JUST 353. Justice and Development **Credits: 3.00**

JUST 357. Environmental Justice **Credits: 3.00**

JUST 372. Ethics and International Politics **Credits: 3.00**

or

POSC 372. Ethics and International Politics **Credits: 3.00**

JUST 373. Rebuilding Post Conflict Societies **Credits: 3.00**

JUST 375. Genocide in the 20th Century **Credits: 3.00**

JUST 377. Global Futures **Credits: 3.00**

JUST 392. Peace Studies **Credits: 3.00**

or

POSC 392. Peace Studies **Credits: 3.00**

Political Science

POSC 347. Comparative Public Policy **Credits: 3.00**

POSC 361. Topics in International Relations **Credits: 3.00** *(if applicable)*

POSC 371. Topics in Comparative Politics **Credits: 3.00** *(if applicable)*

POSC 383. Women and Politics in Comparative Perspective **Credits: 3.00**

or

WGSS 383. Women and Politics in Comparative Perspective **Credits: 3.00**

POSC 393. Human Security **Credits: 3.00**

POSC 394. International Conflict **Credits: 3.00**

POSC 395. International Law **Credits: 3.00**

POSC 396. International Organizations **Credits: 3.00**

POSC 397. The Politics of International Economic Relations **Credits: 3.00**

POSC 398. Simulations **Credits: 3.00**

POSC 430. International Security and Conflict Management **Credits: 3.00**

POSC 440. Post-Conflict Societies **Credits: 3.00**

POSC 458. International Political Analysis **Credits: 3.00**

Religion

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** *(When topic is Gandhi, Nonviolence and Global Transformation)*

Global Human Development Concentration

Political Dynamics of Global Human Development: 3 Credit Hours

Choose one course from the following:

POSC 340. Politics of Development **Credits: 3.00**

POSC 393. Human Security **Credits: 3.00**

POSC 397. The Politics of International Economic Relations **Credits: 3.00**

Historical Patterns: 3 Credit Hours

Choose one course from the following:

Africa

HIST 263. Africa **Credits: 3.00**

HIST 470. Modern Africa **Credits: 3.00**

Asia

HIST 274. Modern East Asia **Credits: 3.00**

HIST 371. India **Credits: 3.00**

HIST 377. History of Korea **Credits: 3.00**

HIST 378. China in the Modern World **Credits: 3.00**

Europe

HIST 309. French History Since 1648 **Credits: 3.00**

HIST 321. Gender and Sexuality in Modern Europe **Credits: 3.00**

HIST 386. The Soviet Union: A Socialist Experiment **Credits: 3.00**

HIST 398. European Military History **Credits: 3.00**

HIST 475. Modern Russia **Credits: 3.00**

HIST 478. Eastern Europe **Credits: 3.00**

HIST 486. Europe Since 1914 **Credits: 3.00**

Latin America

HIST 368. Blurred Borders: A Cultural History of the Caribbean, Latin America and the United States **Credits: 3.00**

ANTH 436. Afro-Latin America **Credits: 3.00**

or

HIST 436. Afro-Latin America **Credits: 3.00**

HIST 444. Revolution and Social Change in Latin America **Credits: 3.00**

HIST 447. South America **Credits: 3.00**

HIST 448. Gender in Latin America and the Iberian World **Credits: 3.00**

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** *(When topic is Latin American Cultures)*

The Middle East

HIST 373. History of the Ottoman Empire, 1453-1922 **Credits: 3.00**

HIST 473. Early Modern Islamic Empires **Credits: 3.00**

HIST 485. Imperial Science and Colonial Knowledge in the Middle East and South Asia **Credits: 3.00**

Regional and Cross Regional Sociopolitical Dynamics: 3 Credit Hours

Choose one course from the following:

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**

ECON 312. Comparative Economic Systems **Credits: 3.00**

GEOG 280. Human Geography: The Cultural Landscape **Credits: 3.00**

GEOG 380. Cultural Geography **Credits: 3.00**

POSC 200. Global Politics [C4GE] **Credits: 3.00**

POSC 340. Politics of Development **Credits: 3.00**

POSC 344. Politics of the European Union **Credits: 3.00**

POSC 345. Politics of Western Europe **Credits: 3.00**

POSC 346. Politics of Central and Eastern Europe **Credits: 3.00**

POSC 350. Latin American Politics **Credits: 3.00**

POSC 354. Politics of the Middle East **Credits: 3.00**

POSC 355. East Asian Politics **Credits: 3.00**

POSC 356. Politics of China **Credits: 3.00**

POSC 371. Topics in Comparative Politics **Credits: 3.00**

SOCI 348. Introduction to Developing Societies **Credits: 3.00**

Depth Component: 9 Credit Hours

Choose three courses from the following, from at least two disciplines. At least one course must be in a discipline other than history or political science.

Economics

ECON 365. Economic Development **Credits: 3.00**

ECON 370. International Trade and Trade Policies **Credits: 3.00**

ECON 372. International Finance and Payments **Credits: 3.00**

or

FIN 372. International Finance and Payments **Credits: 3.00**

Communication

SCOM 248. Intercultural Communication **Credits: 3.00**

Culture

Geography

GEOG 300. Population Geography **Credits: 3.00**

GEOG 325. Environmental Ethics **Credits: 3.00**

GEOG 344. Globalization and Development **Credits: 3.00**

GEOG 345. Geography of Poverty **Credits: 3.00**

History

HIST 469. A History of International Development in the Twentieth Century **Credits: 3.00**

Justice Studies

JUST 331. Human Rights in Theory and Practice **Credits: 3.00**

or

POSC 331. Human Rights in Theory and Practice **Credits: 3.00**

JUST 353. Justice and Development **Credits: 3.00**

JUST 357. Environmental Justice **Credits: 3.00**

JUST 372. Ethics and International Politics **Credits: 3.00**

or

POSC 372. Ethics and International Politics **Credits: 3.00**

JUST 373. Rebuilding Post Conflict Societies **Credits: 3.00**

JUST 377. Global Futures **Credits: 3.00**

JUST 392. Peace Studies **Credits: 3.00**

or

POSC 392. Peace Studies **Credits: 3.00**

Political Science

POSC 347. Comparative Public Policy **Credits: 3.00**

POSC 361. Topics in International Relations **Credits: 3.00 (if applicable)**

POSC 371. Topics in Comparative Politics **Credits: 3.00 (if applicable)**

POSC 383. Women and Politics in Comparative Perspective **Credits: 3.00**

POSC 393. Human Security **Credits: 3.00**

POSC 395. International Law **Credits: 3.00**

POSC 396. International Organizations **Credits: 3.00**

POSC 397. The Politics of International Economic Relations **Credits: 3.00**

POSC 440. Post-Conflict Societies **Credits: 3.00**

Religion

HUM 252. Global Cultures [C2HQC] **Credits: 3.00 (When topic is Gandhi, Nonviolence and Global Transformation)**

International Conflict and Security Concentration

Political Dynamics of International Conflict and Security: 3 Credit Hours

Choose one course from the following:

POSC 372. Ethics and International Politics **Credits: 3.00**

or

JUST 372. Ethics and International Politics **Credits: 3.00**

POSC 394. International Conflict **Credits: 3.00**

POSC 430. International Security and Conflict Management **Credits: 3.00**

Historical Patterns: 3 Credit Hours

Choose one course from the following:

Africa

HIST 263. Africa **Credits: 3.00**

HIST 470. Modern Africa **Credits: 3.00**

Asia

HIST 274. Modern East Asia **Credits: 3.00**

HIST 371. India **Credits: 3.00**

HIST 377. History of Korea **Credits: 3.00**

HIST 378. China in the Modern World **Credits: 3.00**

Europe

HIST 309. French History Since 1648 **Credits: 3.00**

HIST 321. Gender and Sexuality in Modern Europe **Credits: 3.00**

HIST 386. The Soviet Union: A Socialist Experiment **Credits: 3.00**

HIST 398. European Military History **Credits: 3.00**

HIST 475. Modern Russia **Credits: 3.00**

HIST 478. Eastern Europe **Credits: 3.00**

HIST 486. Europe Since 1914 **Credits: 3.00**

Latin America

HIST 368. Blurred Borders: A Cultural History of the Caribbean, Latin America and the United States **Credits: 3.00**

HIST 436. Afro-Latin America **Credits: 3.00**

or

ANTH 436. Afro-Latin America **Credits: 3.00**

HIST 444. Revolution and Social Change in Latin America **Credits: 3.00**

HIST 447. South America **Credits: 3.00**

HIST 448. Gender in Latin America and the Iberian World **Credits: 3.00**
HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (*When topic is Latin American Cultures*)

The Middle East

HIST 373. History of the Ottoman Empire, 1453-1922 **Credits: 3.00**
HIST 473. Early Modern Islamic Empires **Credits: 3.00**
HIST 485. Imperial Science and Colonial Knowledge in the Middle East and South Asia **Credits: 3.00**

Regional and Cross Regional Sociopolitical Dynamics: 3 Credit Hours

Choose one course from the following:

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**
ECON 312. Comparative Economic Systems **Credits: 3.00**
GEOG 280. Human Geography: The Cultural Landscape **Credits: 3.00**
GEOG 380. Cultural Geography **Credits: 3.00**
POSC 200. Global Politics [C4GE] **Credits: 3.00**
POSC 340. Politics of Development **Credits: 3.00**
POSC 344. Politics of the European Union **Credits: 3.00**
POSC 345. Politics of Western Europe **Credits: 3.00**
POSC 346. Politics of Central and Eastern Europe **Credits: 3.00**
POSC 350. Latin American Politics **Credits: 3.00**
POSC 354. Politics of the Middle East **Credits: 3.00**
POSC 355. East Asian Politics **Credits: 3.00**
POSC 356. Politics of China **Credits: 3.00**
POSC 371. Topics in Comparative Politics **Credits: 3.00**
SOCI 348. Introduction to Developing Societies **Credits: 3.00**

Depth Component: 9 Credit Hours

Choose three courses from the following, from at least two disciplines. At least one course must be in a discipline other than history or political science.

Economics

ECON 327. Game Theory **Credits: 3.00**

Communication

SCOM 248. Intercultural Communication **Credits: 3.00**
SCOM 331. Communication and Conflict **Credits: 3.00**
SCOM 332. Mediation **Credits: 3.00**
SCOM 334. Alternative Dispute Resolution **Credits: 3.00**

Culture

ANTH 366. Anthropology of War **Credits: 3.00**

History

HIST 397. U.S. Military History **Credits: 3.00**
HIST 398. European Military History **Credits: 3.00**

Justice Studies

JUST 322. Understanding Violence and Nonviolence **Credits: 3.00**

JUST 331. Human Rights in Theory and Practice **Credits: 3.00**
or

POSC 331. Human Rights in Theory and Practice **Credits: 3.00**

JUST 372. Ethics and International Politics **Credits: 3.00**
or

POSC 372. Ethics and International Politics **Credits: 3.00**

JUST 373. Rebuilding Post Conflict Societies **Credits: 3.00**

JUST 374. War and Justice **Credits: 3.00**

JUST 375. Genocide in the 20th Century **Credits: 3.00**

JUST 392. Peace Studies **Credits: 3.00**
or

POSC 392. Peace Studies **Credits: 3.00**

Political Science

POSC 361. Topics in International Relations **Credits: 3.00**

POSC 371. Topics in Comparative Politics **Credits: 3.00**

POSC 393. Human Security **Credits: 3.00**

POSC 394. International Conflict **Credits: 3.00**

POSC 395. International Law **Credits: 3.00**

POSC 396. International Organizations **Credits: 3.00**

POSC 398. Simulations **Credits: 3.00**

POSC 430. International Security and Conflict Management **Credits: 3.00**

POSC 435. International Terrorism **Credits: 3.00**

POSC 440. Post-Conflict Societies **Credits: 3.00**

POSC 458. International Political Analysis **Credits: 3.00**

Religion

REL 363. Apocalypticism, Religious Terrorism and Peace **Credits: 3.00**

Comparative Study Concentration

Coordinator: Keith Grant

Location: Miller Hall, Room 2167

Email: grantka@jmu.edu

Phone: (540) 568-4336

The following international/cross-area courses and area courses are required in addition to the core courses listed under Major Requirements. Students in the comparative study concentration must complete the requirements for all three areas. Students may use three credits of INTA 301W for international/cross-area or area credit. INTA 301W will always count as a political science course. The precise manner in which INTA 301W will count toward the major will be determined in consultation between students wishing to take INTA 301W and the international affairs coordinator.

International and Cross-Area Courses

Each course must come from a different field of study. The potential fields are listed below.

Complete two courses: 6 Credit Hours

No course taken for this requirement may be used to fulfill a requirement elsewhere in the major.

Cross-Cultural

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**
SCOM 248. Intercultural Communication **Credits: 3.00**
SOCI 336. Race and Ethnicity **Credits: 3.00**
SOCI 348. Introduction to Developing Societies **Credits: 3.00**

Economics

Students double-majoring in economics and international affairs may count ECON 372 as an international and cross-area course, in the economics box.
ECON 312. Comparative Economic Systems **Credits: 3.00**
ECON 365. Economic Development **Credits: 3.00**

Geography

GEOG 280. Human Geography: The Cultural Landscape **Credits: 3.00**
GEOG 300. Population Geography **Credits: 3.00**
GEOG 325. Environmental Ethics **Credits: 3.00**
GEOG 344. Globalization and Development **Credits: 3.00**
GEOG 345. Geography of Poverty **Credits: 3.00**
GEOG 375. Political Geography **Credits: 3.00**
GEOG 380. Cultural Geography **Credits: 3.00**

History

HIST 469. A History of International Development in the Twentieth Century **Credits: 3.00**

Humanities

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (When topic is Gandhi, Nonviolence and Global Transformation)

Political Science

POSC 340. Politics of Development **Credits: 3.00**
POSC 347. Comparative Public Policy **Credits: 3.00**
POSC 348. The Politics of Cultural Pluralism **Credits: 3.00**
POSC 361. Topics in International Relations **Credits: 3.00**¹
POSC 370. U.S. Foreign Policy **Credits: 3.00**
POSC 371. Topics in Comparative Politics **Credits: 3.00**¹
POSC 392. Peace Studies **Credits: 3.00**
or
JUST 392. Peace Studies **Credits: 3.00**
POSC 395. International Law **Credits: 3.00**
POSC 396. International Organizations **Credits: 3.00**
POSC 397. The Politics of International Economic Relations **Credits: 3.00**
POSC 398. Simulations **Credits: 3.00**¹
POSC 430. International Security and Conflict Management **Credits: 3.00**
POSC 458. International Political Analysis **Credits: 3.00**

Footnote

¹ When course topic is appropriate for the chosen concentration. Students should consult with the INTA coordinator about the suitability of a particular course.

Area Requirements

Students may choose from five tracks to fulfill the area requirement: Africa, Asia, Europe, Latin America or the Middle East. Students must complete four courses for their specific area. These courses must come from at least three fields of study. The potential fields are listed below. At least one of these courses must be a history course. Students with advanced language skills may also enroll in a 400-level literature course to meet the culture requirement. The following lists the potential courses for each of these areas.

Africa Track

These courses must come from at least three fields of study. The potential fields are listed below.

Complete four courses: 12 Credit Hours

No course taken for this requirement may be used to fulfill a requirement elsewhere in the major.

Africana Studies

AAAD 400. Advanced Topics in African, African American and Diaspora Studies **Credits: 3.00**¹

Culture

ANTH 280. Peoples and Cultures of Sub-Saharan Africa **Credits: 3.00**
ANTH 391. Study Abroad **Credits: 1.00 – 6.00** (in Kenya only; East Africa Field School)
ANTH 395. Special Topics in Anthropology **Credits: 3.00**¹
ARTH 210. African Art & Culture in the Humanities **Credits: 3.00**
ARTH 312. African Art: Sub-Saharan **Credits: 3.00**
ARTH 419. Topics in African Art **Credits: 3.00**
ARTH 424. Arts of Ancient Egypt **Credits: 3.00**
ENG 377. Introduction to African Literature **Credits: 3.00**
ENG 432. Advanced Studies in African Literature **Credits: 3.00**
REL 300. Selected Topics in Religion **Credits: 3.00**¹
REL 250. Islamic Religious Traditions **Credits: 3.00**
REL 330. Religions of Africa and the African Diaspora **Credits: 3.00**
SOCI 348. Introduction to Developing Societies **Credits: 3.00**

Economics

ECON 365. Economic Development **Credits: 3.00**

Geography

GEOG 335. Geography of Africa **Credits: 3.00**²

History

HIST 263. Africa **Credits: 3.00**
HIST 341. Selected Themes in World History **Credits: 3.00**¹
HIST 436. Afro-Latin America **Credits: 3.00**

ANTH 436. Afro-Latin America **Credits: 3.00**
 HIST 470. Modern Africa **Credits: 3.00**
 HIST 489. Selected Topics in World History **Credits: 3.00**¹

Political Science

POSC 353. African Politics **Credits: 3.00**
 POSC 371. Topics in Comparative Politics **Credits: 3.00**¹

Footnotes

¹ May be taken only when the subject matter is appropriate for this geographic concentration. Students should consult with the INTA coordinator about the suitability of a particular course.

² This course is found in the university catalog but is taught very infrequently. As such student should not count on this course being available in a timely fashion.

Asia Track

These courses must come from at least three fields of study. The potential fields are listed below.

Complete four courses: 12 Credit Hours

No course taken for this requirement maybe used to fulfill a requirement elsewhere in the major.

Culture

ANTH 295. People and Cultures of East Asia **Credits: 3.00**
 ANTH 395. Special Topics in Anthropology **Credits: 3.00**¹
 ARTH 430. Far Eastern Art **Credits: 3.00**
 ENG 378. Studies in South Asian Literature **Credits: 3.00**
 REL 300. Selected Topics in Religion **Credits: 3.00**¹
 REL 310. (Re)thinking Order and Chaos: An Introduction to Hinduism **Credits: 3.00**
 REL 410. Dharma/Adharma: Hindu Ethical Reasoning **Credits: 3.00**

Geography

GEOG 334. Geography of East and Southeast Asia **Credits: 3.00**²

History

HIST 274. Modern East Asia **Credits: 3.00**
 HIST 341. Selected Themes in World History **Credits: 3.00**¹
 HIST 371. India **Credits: 3.00**
 HIST 372. Afghanistan in Regional and Global Systems **Credits: 3.00**
 HIST 377. History of Korea **Credits: 3.00**
 HIST 378. China in the Modern World **Credits: 3.00**
 HIST 473. Early Modern Islamic Empires **Credits: 3.00**
 HIST 489. Selected Topics in World History **Credits: 3.00**¹

Political Science

POSC 355. East Asian Politics **Credits: 3.00**
 POSC 356. Politics of China **Credits: 3.00**
 POSC 371. Topics in Comparative Politics **Credits: 3.00**¹

Footnotes

¹ May be taken only when the subject matter is appropriate for this geographic concentration. Students should consult with the INTA coordinator about the suitability of a particular course.

² This course is found in the university catalog but is taught very infrequently. As such, students should not count on this course being available for scheduling in a timely fashion.

Europe Track

These courses must come from at least three fields of study. The potential fields are listed below.

Complete four courses: 12 Credit Hours

No course taken for this requirement may be use to fulfill a requirement elsewhere in the major.

All students in this track must complete POSC 344. Politics of the European Union.

Political Science

POSC 344. Politics of the European Union **Credits: 3.00**
 POSC 345. Politics of Western Europe **Credits: 3.00**
 POSC 346. Politics of Central and Eastern Europe **Credits: 3.00**
 POSC 371. Topics in Comparative Politics **Credits: 3.00**¹

Culture

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**
 ARTH 313. Masterpieces of Italian Renaissance Art **Credits: 3.00** (Semester in Florence only)
 ARTH 314. Masterpieces of Spanish Art [C2VPA] **Credits: 3.00** (Semester in Salamanca only)
 ARTH 316. Masterpieces of British Art **Credits: 3.00** (Semester in London only)
 ENG 340. Modern British and Irish Literature **Credits: 3.00**
 ENG 341. Contemporary British and Irish Literature **Credits: 3.00**
 ENG 375. Irish and Anglo-Irish Literature **Credits: 3.00**
 ENG 376. Introduction to Scottish Literature **Credits: 3.00**
 ENG 403. Advanced Studies in British Literature After 1700 **Credits: 3.00**
 ENG 436. Studies in German Literature **Credits: 3.00**
 ENG 437. Studies in Italian Literature **Credits: 3.00**
 ENG 438. Studies in Russian Literature **Credits: 3.00**
 ENG 439. Advanced Studies in Major Authors of Literature in Spanish in Translation **Credits: 3.00**

or

SPAN 439. Major Authors of Literature in Spanish in Translation **Credits: 3.00**
 FL 446. Special Topics in Foreign Literature **Credits: 3.00**¹
 FL 447. Special Topics in Civilization and Culture **Credits: 3.00**¹
 FR 308. Contemporary History and Culture in the Francophone World **Credits: 3.00**
 FR 375. Business and Society in the Francophone World **Credits: 3.00**
 FR 465. French Cinema 1930-1980 **Credits: 3.00**
 FR 466. Contemporary French Cinema **Credits: 3.00**
 GER 308. Contemporary German Culture and Society **Credits: 3.00**
 GER 425. Modern German Literature **Credits: 3.00**
 GER 465. German Cinema **Credits: 3.00**
 HIST 373. History of the Ottoman Empire, 1453-1922 **Credits: 3.00**
 HIST 476. Revolutionary Russia **Credits: 3.00**
 ITAL 308. Contemporary Italian History and Culture **Credits: 3.00**
 ITAL 375. Business and Society in Italy **Credits: 3.00**

ITAL 425. Modern Italian Literature **Credits: 3.00**
 ITAL 465. Italian Cinema **Credits: 3.00**
 RUS 308. Introduction to Russian Culture **Credits: 3.00**
 SPAN 307. History of Spanish Culture and Society **Credits: 3.00**
 SPAN 405. Spanish Novels of the 19th and 20th Centuries **Credits: 3.00**
 SPAN 406. Spanish Drama of the 19th and 20th Centuries **Credits: 3.00**
 SPAN 461. Post War Literature in Spain **Credits: 3.00**

Economics

Geography

GEOG 332. Geography of Europe **Credits: 3.00**²

History

HIST 398. European Military History **Credits: 3.00**
 ITAL 308. Contemporary Italian History and Culture **Credits: 3.00**
 HIST 309. French History Since 1648 **Credits: 3.00**
 HIST 321. Gender and Sexuality in Modern Europe **Credits: 3.00**
 HIST 341. Selected Themes in World History **Credits: 3.00**
 HIST 382. Europe in the 20th Century **Credits: 3.00**
 HIST 386. The Soviet Union: A Socialist Experiment **Credits: 3.00**
 HIST 388. Germany Since 1871 **Credits: 3.00**
 HIST 474. Stalinism: Approaches, Experiences and Legacies **Credits: 3.00**
 HIST 475. Modern Russia **Credits: 3.00**
 HIST 478. Eastern Europe **Credits: 3.00**
 HIST 482. French History Seminar **Credits: 3.00**
 HIST 486. Europe Since 1914 **Credits: 3.00**
 HIST 487. World War II **Credits: 3.00**
 HIST 489. Selected Topics in World History **Credits: 3.00**

Footnotes

¹ May be taken only when the subject matter is appropriate for this geographic concentration. Students should consult with the INTA coordinator about the suitability of a particular course.

² This course is found in the university catalog but is taught very infrequently. As such, students should not count on this course being available for scheduling in a timely fashion.

Latin America Track

These courses must come from at least three fields of study. The potential fields are listed below.

Complete four courses: 12 Credit Hours

No course taken for this requirement maybe used to fulfill a requirement elsewhere in the major.

Culture

ANTH 265. Peoples and Cultures of Latin America and the Caribbean **Credits: 3.00**
 ANTH 395. Special Topics in Anthropology **Credits: 3.00**¹
 ENG 434. Advanced Studies in Latin American Literature in Translation **Credits: 3.00**
 or
 SPAN 434. Advanced Studies in Latin American Literature in Translation **Credits: 3.00**
 SPAN 308. Latin American Cultures **Credits: 3.00**
 SPAN 385. Latin American Short Story **Credits: 3.00**
 SPAN 395. Latin American Poetry **Credits: 3.00**

SPAN 415. Latin American Novel **Credits: 3.00**
 SPAN 446. Special Topics in Spanish Literature **Credits: 3.00**¹
 SPAN 447. Special Topics in Spanish Culture **Credits: 3.00**¹
 SPAN 485. Business and Society in Latin America **Credits: 3.00**

Geography

GEOG 337. Geography of Latin America **Credits: 3.00**²

History

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (When topic is Latin American Cultures)
 HIST 302. Plazas, Protests and Processions: An Urban History of the Americas **Credits: 3.00**
 HIST 341. Selected Themes in World History **Credits: 3.00**¹
 HIST 436. Afro-Latin America **Credits: 3.00**
 or
 ANTH 436. Afro-Latin America **Credits: 3.00**
 HIST 437. Latin America and Latin Americans through Film: Focus on the Twentieth Century **Credits: 3.00**
 HIST 444. Revolution and Social Change in Latin America **Credits: 3.00**
 HIST 368. Blurred Borders: A Cultural History of the Caribbean, Latin America and the United States **Credits: 3.00**
 HIST 447. South America **Credits: 3.00**
 HIST 448. Gender in Latin America and the Iberian World **Credits: 3.00**
 HIST 489. Selected Topics in World History **Credits: 3.00**¹

Political Science

POSC 350. Latin American Politics **Credits: 3.00**
 POSC 371. Topics in Comparative Politics **Credits: 3.00**¹

Footnotes

¹ May be taken only when the subject matter is appropriate for this geographic concentration. Students should consult with the INTA coordinator about the suitability of a particular course.

² This course is found in the university catalog but is taught very infrequently. As such, students should not count on this course being available for scheduling in a timely fashion.

Middle East Track

These courses must come from at least three fields of study. The potential fields are listed below.

Complete four courses: 12 Credit Hours

No course taken for this requirement maybe used to fulfill a requirement elsewhere in the major.

Culture

ANTH 395. Special Topics in Anthropology **Credits: 3.00**¹
 ARTH 332. Islamic Art and Architecture **Credits: 3.00**
 ARTH 424. Arts of Ancient Egypt **Credits: 3.00**
 ARAB 446. Special Topics in Arabic Literature **Credits: 3.00**¹
 ARAB 447. Special Topics in Arabic Civilization and Culture **Credits: 3.00**¹
 ENG 433. Advanced Studies in Arabic Literature **Credits: 3.00**
 REL 300. Selected Topics in Religion **Credits: 3.00**¹

REL 250. Islamic Religious Traditions **Credits: 3.00**
REL 320. Judaism **Credits: 3.00**
REL 350. Islamic Law and Society **Credits: 3.00**
SOCI 342. Social Movements in the Middle East **Credits: 3.00**
SOCI 348. Introduction to Developing Societies **Credits: 3.00**

Economics

ECON 365. Economic Development **Credits: 3.00**

History

HIST 352. The Premodern Middle East: Themes and Intersections **Credits: 3.00**
HIST 341. Selected Themes in World History **Credits: 3.00**¹
HIST 373. History of the Ottoman Empire, 1453-1922 **Credits: 3.00**
HIST 473. Early Modern Islamic Empires **Credits: 3.00**
HIST 485. Imperial Science and Colonial Knowledge in the Middle East and South Asia **Credits: 3.00**
HIST 489. Selected Topics in World History **Credits: 3.00**¹

Political Science

POSC 340. Politics of Development **Credits: 3.00**
POSC 354. Politics of the Middle East **Credits: 3.00**
POSC 371. Topics in Comparative Politics **Credits: 3.00**¹

Footnote

¹ May be taken only when the subject matter is appropriate for this geographic concentration. Students should consult with the INTA coordinator about the suitability of a particular course.

Comparative Study Concentration Total: 18 Credit Hours

Internships

A maximum of three credits in the major may be earned through an internship. Students must consult with the international affairs coordinator PRIOR to doing an internship to check on its applicability to the major.

Study Abroad and Washington Semester

Many of the courses available to students through JMU's Office of International Programs and the Washington Semester program can be used to fulfill requirements in the INTA major. Students planning to go abroad should keep this in mind in working out their schedules and must consult the INTA coordinator for course approvals and substitutions.

If you have questions about the Washington Semester, review the program website (<http://www.jmu.edu/polisci/washington.shtml>) and contact the program director, David Jones.

Program Total: 120 Credit Hours

Public Administration, B.S.

Program Description

Coordinator: Robert Roberts
Location: Miller Hall, Room 2133
Email: robertrn@jmu.edu
Phone: (540) 568-6323

The major in public administration provides students with a general foundation in the nature of public policy, the public workplace and its political, legal and managerial environments. This major prepares students for professional employment and leadership in government and nonprofit organizations. The program consists of a core of courses offering general knowledge essential for understanding and working in the public arena. This core provides students with an appreciation of the political culture and economic environment of public work, measurement techniques and a basic understanding of the policy process.

Students are offered a choice between two concentration options: public policy or public management.

In the public policy concentration students acquire knowledge of the nature, dynamics, implementation and substance of public policy and its analysis. Courses address:

- Policy processes.
- Techniques for analyzing policy options.
- The dynamics and substance of particular policy issues.

The public management concentration emphasizes management and management-related skills. Courses address:

- The legal environment of public work.
- Organization theories.
- Management theories and applications.
- Management best practices.

In addition, courses in both concentrations heighten students' critical, analytical and communication skills through case studies, exercises and the intensive writing requirement. The public policy concentration requires a senior seminar experience that seeks to bring policy theory and analytical skills to bear on a practical issue of public policy. Public management students must complete the dual capstone requirements of a public management seminar and an internship, requiring an integration of knowledge from both general studies and major studies by focusing students on specific cases and workplace applications.

Because the public administration major develops techniques and skills applicable to varied career paths in public service, students are encouraged to choose a complementary minor with a narrower, substantive focus. The minors recommended for students' consideration include criminal justice, environmental information systems, environmental management, environmental studies, family studies, gerontology, health information systems, nonprofit studies, political communication, substance abuse intervention, telecommunications, urban and regional studies, communication studies, conflict analysis and intervention, sociology, technical and scientific communication, economics, human resource development, computer science, public health, and integrated science and technology.

Interested students may apply to participate in the Fifth Year Master of Public Administration degree program, which allows qualified students to earn an M.P.A. degree with one additional year of study. Students should apply for this

program in their sophomore year. See the Graduate Catalog for more information.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement ^{2,3}	3
Scientific Literacy requirement ²	3
University electives	33-34
Major requirements (listed below)	39-40
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.

² In addition to course work taken to fulfill General Education requirements.

³ For this requirement, public policy and administration majors should take MATH 220, the prerequisite for POSC 295, a required core course in the major.

Major Requirements

Core Requirements: 17 Credit Hours

POSC 225. U.S. Government [C4AE] **Credits: 4.00**
ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**
PPA 200. Introduction to Public Policy **Credits: 3.00**
PPA 265. Public Administration **Credits: 3.00**
POSC 295. Research Methods **Credits: 4.00** ¹

Footnote

¹ The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.

Public Administration Concentrations

Public Management Concentration

Required Concentration Courses: 12 Credit Hours

ACTG 244. Accounting for Non-Business Majors **Credits: 3.00**
MGT 365. Fundamentals of Human Resource Management **Credits: 3.00**
PPA 381. Budgetary Process **Credits: 3.00**
PPA 415. Legal Environment of Public Administration **Credits: 3.00**

Process, Issue and Application course: 3 Credit Hours

(Choose one):

GEOG 215. Introduction to Geographic Information Science and Cartography **Credits: 3.00**
GEOG 216. Earth Observation and GPS **Credits: 3.00**
GEOG 344. Globalization and Development **Credits: 3.00**
GEOG 345. Geography of Poverty **Credits: 3.00**
NPS 300. Introduction to Nonprofits **Credits: 3.00**
PPA 460. Regionalism and Urban Management **Credits: 3.00**
PPA 461. Education and Social Policy **Credits: 3.00**
PPA 462. Social Welfare and Local Government Policy **Credits: 3.00**
PPA 469. Philanthropy and Volunteerism **Credits: 3.00**
PPA 470. Nonprofit Management and Leadership **Credits: 3.00**
PPA 471. Financial Management for Nonprofit Organizations **Credits: 3.00**
PPA 472. Contract Management **Credits: 3.00**
PPA 473. Economic and Community Development **Credits: 3.00**
PPA 475. Grant Writing and Project Management **Credits: 3.00**
PPA 483. Special Topics in Public Management **Credits: 3.00**
PPA 484. Environmental Regulatory Policy and Politics **Credits: 3.00**
PPA 485. Governance for Environmental Sustainability **Credits: 3.00**
SCOM 350. Organizational Communication **Credits: 3.00**
Approved WRTC course (*Consult the PPA coordinator.*)

Required Capstone Courses: 8 Credit Hours

PPA 420. Public Management **Credits: 4.00** ¹
PPA 496. Internship in Public Management **Credits: 4.00** ²

Footnotes

¹ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

² Students may substitute PPA 496W for either PPA 494 or PPA 496 with the approval of the PPA coordinator.

Public Management Concentration Total: 23 Credit Hours

Public Policy Concentration

Required Course: 3 credits

PPA 359. Policy Analysis **Credits: 3.00**

Choose two of the following: 6 Credit Hours

POSC 302. State & Local Gov **Credits: 3.00**
POSC 351. Topics in American Politics **Credits: 3.00**
POSC 368. Interest Groups, Lobbying and Public Policy **Credits: 3.00**
POSC 380. The U.S. Presidency **Credits: 3.00**
POSC 385. The U.S. Congress **Credits: 3.00**
POSC 386. The U.S. Judiciary **Credits: 3.00**
PPA 412. Seminar in Intergovernmental Relations **Credits: 3.00**

Choose three substantive policy electives from the following: 9-10 Credit Hours

- POSC 347. Comparative Public Policy Credits: 3.00
- POSC 367. U.S. Immigration and Refugee Law Credits: 3.00
- POSC 391. Topics in Public Policy Credits: 3.00
- POSC 397. The Politics of International Economic Relations Credits: 3.00
- PPA 441. Stability and Recovery Operations Credits: 3.00
- PPA 460. Regionalism and Urban Management Credits: 3.00
- PPA 461. Education and Social Policy Credits: 3.00
- PPA 462. Social Welfare and Local Government Policy Credits: 3.00
- PPA 482. Special Topics in Public Policy Credits: 3.00
- PPA 484. Environmental Regulatory Policy and Politics Credits: 3.00
- PPA 485. Governance for Environmental Sustainability Credits: 3.00
- PPA 494. Internship in Public Policy Credits: 4.00
- Approved ISAT course (Consult the PPA coordinator)

Senior Capstone: 4 Credit Hours

- PPA 492. Senior Seminar in Public Policy Credits: 4.00 ^{3,4}

Footnotes

³ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

⁴ Students should fulfill the senior capstone requirement for each major and minor separately. This means that senior experiences completed for one major or minor cannot normally be counted for another. Students who have questions about a particular situation should see the department head or appropriate department coordinator for clarification.

Public Policy Concentration Total: 22-23 Credit Hours

Major Requirements Total: 39-40 Credit Hours

Program Total: 120 Credit Hours

Department of Psychology

Jessica Salvatore, **Department Head**
Phone: (540) 568-6114
Email: ugpsyc@jmu.edu
Location: Miller Hall, Room 1120
Website: <http://www.psyc.jmu.edu/undergraduate>

Professors

J. Andre, K. Apple, S. Baker, K. Barron, D. Daniel, J. Dyche, W. Evans, M. Hall, D. Holt, J. Irons, K. Jakobsen, N. Kerr, J. Kurtz, S. Lovell, C. Lyons, M. Reis-Bergan, B. Saville, M. Stoloff, T. Zinn

Associate Professors

R. Kondrad, K. Melchiori, K. Moore, J. Salvatore, M. Shoup-Knox

Assistant Professors

B. Blankenship, J. Taft Young, S. Upadhyay

Senior Lecturer

K. DuVall

Mission Statement

The mission of the Department of Psychology is to educate students in, and contribute to, the science of psychology.

Goals

The vision of the Department of Psychology is to sustain and advance a nationally recognized department focused on promoting scientific proficiency within the cross-disciplinary field of psychology. To that end, the curriculum is designed to provide students with a strong foundation in psychological science that reflects multiple perspectives within the discipline. The hallmarks of our program are learning opportunities that promote the skills necessary to conduct and evaluate research and to interpret findings. The department trains our students to be responsive to emerging trends and apply their knowledge of psychological science as responsible global citizens.

The Department of Psychology is a dynamic contributor to the General Education program and the university community through the delivery of high-quality courses and other educational experiences emphasizing psychological science. We also contribute to the M.A. program in psychological science. Our faculty strive to create and implement creative and effective pedagogy, embracing the dual role of teacher/scholar. The department fosters a collegial and collaborative environment within which divergent opinions as well as cultural diversity are respected, valued and promoted.

Admission and Retention Requirements

Information on admission to programs within the Department of Psychology, retention and minimum grade requirements may be found on the individual program pages listed below:

General Psychology, B.A.

Program Description

A student must complete a minimum of 44 PSYC credits and at least 60 non-PSYC credits.

Admission and Retention Requirements

Students who wish to pursue the psychology major must 1) declare the major and 2) meet admissions requirements.

Deadline for Declaration of Psychology major (B.A., B.S. or 2nd major)

Semester	Deadline
Summer	February 15

Fall	February 15
Spring	September 15 of the previous year

Requests to declare the major after the deadline will be processed the following semester.

Requirements for Admission to the Major

Students interested in completing the psychology major must meet the department's progression standards and be fully admitted to the major. The number of semesters required to complete the program will depend on the timing of the student's admission to psychology and the number of summer courses completed.

Students who meet all of the following criteria will be fully admitted to the major and will be permitted to take psychology major courses. Equivalent courses completed at another university for which the student has earned JMU approved transfer credit are acceptable.

- Complete PSYC 101. General Psychology [C5SD], with a minimum grade of "C." Equivalent courses completed at other institutions that transfer to JMU are acceptable.
- Complete MATH 205, MATH 220, MATH 231, MATH 235 or another acceptable math course with a minimum grade of "C." Equivalent courses completed at other institutions that transfer to JMU are acceptable.
- Complete any General Education Psychology course (PSYC 101, PSYC 122 or PSYC 160) with a minimum grade of "B." Earning a 4 on the AP Psychology exam meets this requirement. With departmental approval, grades from other institutions can fulfill this requirement.
- Complete an online orientation and application, available from the psychology department website.

Declared psychology majors who meet the criteria for admission and register for PSYC 210 or PSYC 212 will be fully admitted to the major. Students not admitted to the major may be admitted in a later semester, once they meet admissions requirements.

Retention

All psychology courses taken must carry a minimum grade of "C-" to apply to the major. A psychology course completed with a grade of "D" may be credited toward graduation requirements but may not be included in courses credited toward the psychology major.

Prerequisites

Psychology majors must complete PSYC 101 and two statistics and research methodology courses (PSYC 210-PSYC 211 or PSYC 212-PSYC 213) before enrolling in courses numbered 330 and above. The prerequisites for PSYC 210 and PSYC 212 are any mathematics course numbered 205 or above

and PSYC 101. Some psychology courses numbered 330 and above have specific prerequisites. See course listings for details.

Registration and Assessment

During registration, psychology majors will be given priority for course selection. Graduating majors must participate in assessment activities. Assessment information helps the faculty modify the curriculum to meet student needs.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required)	0-14
Philosophy course(s) (in addition to General Education courses)	3
Major requirements (listed below)	44
Electives	18-32
Total	120

Major Requirements

The courses listed below are required of all students pursuing a Bachelor of Arts degree, regardless of whether psychology is their first or second major.

PSYC 101. General Psychology [C5SD] **Credits: 3.00**

Methodology Core: 8 Credit Hours

PSYC 210 and PSYC 211 are offered every semester; PSYC 212 is offered only during the fall semester; PSYC 213 is offered only during the spring semester.

Choose one of the following sequences:

PSYC 210. Psychological Measurement and Statistics **Credits: 4.00** and

PSYC 211. Psychological Research Methods **Credits: 4.00**

PSYC 212. Psychological Research Design and Data Analysis I **Credits: 4.00** and

PSYC 213. Psychological Research Design and Data Analysis II **Credits: 4.00**

SS Content Core – Psychology as a Social Science: 9 Credit Hours

Choose at least three of the following:

PSYC 330. Psychology of Personality **Credits: 3.00**

PSYC 335. Abnormal Psychology **Credits: 3.00**

PSYC 345. Social Psychology **Credits: 3.00**

PSYC 365. Developmental Psychology **Credits: 3.00**

NS Content Core – Psychology as a Natural Science: 9 Credit Hours

Choose at least three of the following:

PSYC 375. Sensation and Perception **Credits: 3.00**

or

BIO 375. Sensation and Perception **Credits: 3.00**

PSYC 380. Cognitive Psychology **Credits: 3.00**

PSYC 385. Biopsychology **Credits: 3.00**

or

BIO 385. Biopsychology **Credits: 3.00**

PSYC 390. Psychology of Learning **Credits: 3.00**

PSYC 395. Comparative Animal Behavior **Credits: 3.00**

or

BIO 395. Comparative Animal Behavior **Credits: 3.00**

Upper Level Specialty Content Courses: 3 Credit Hours

Choose at least one of the following:

PSYC 400. Advanced Topics in Psychology **Credits: 1.00 – 3.00**

PSYC 410. Psychology of the Workplace **Credits: 3.00**

PSYC 415. Forensic Psychology **Credits: 3.00**

PSYC 420. Advanced Psychological Statistics **Credits: 3.00**

PSYC 425. School Psychology **Credits: 3.00**

PSYC 427. Tests and Measurements **Credits: 3.00**

PSYC 428. Educational Psychology **Credits: 3.00**

PSYC 430. Clinical Psychology **Credits: 3.00**

PSYC 435. Community Psychology **Credits: 3.00**

PSYC 450. Psychology of Child Abuse and Neglect **Credits: 3.00**

PSYC 452. Child Psychopathology **Credits: 3.00**

PSYC 460. Community Psychology Within Developing Societies **Credits: 3.00**

PSYC 461. Advanced Study Abroad in Psychology **Credits: 1.00–4.00**

PSYC 475. Psychology of Adulthood **Credits: 3.00**

PSYC 480. Applied Behavior Analysis **Credits: 3.00**

Psychology electives: 9 Credit Hours

At least three hours must be at the 400 level.

Capstone course: 3 Credit Hours

Departmental approval is required for students to enroll in more than one psychology capstone course.

Choose one of the following:

PSYC 492. History of Psychology **Credits: 3.00**

PSYC 493. Laboratory in Psychology **Credits: 3.00**

PSYC 495. Field Placement in Psychology **Credits: 4.00**

PSYC 497. Senior Seminar **Credits: 3.00**²

PSYC 499A. Honors **Credits: 2.00**²

and

PSYC 499B. Honors **Credits: 2.00**²

and

PSYC 499C. Honors **Credits: 2.00**²

Sociocultural Competency: 0 Credit Hours

Choose one of the following:³

PSYC 220. Psychology and Culture **Credits: 3.00**

PSYC 308. Health Psychology **Credits: 3.00**

PSYC 310. The Psychology of Women and Gender **Credits: 3.00**

PSYC 320. Diversity Issues in Psychology **Credits: 3.00**

PSYC 325. Counseling Psychology **Credits: 3.00**

PSYC 410. Psychology of the Workplace **Credits: 3.00**

PSYC 460. Community Psychology Within Developing Societies **Credits: 3.00**

Other course sections that meet the sociocultural competency requirement

Total: 44 Credit Hours

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² Some sections of this course may meet the sociocultural awareness requirement depending on the content; when this course does meet the requirement it will be listed in the notes section of the course listing in MyMadison.

³ One sociocultural competency course is required. Credit for this course may be counted under one of the other major categories.

Recommended Schedule for Majors

The following program sample is intended as a guide. Courses must be taken in the sequence outlined; however, the semester during which a particular course is taken depends on a number of factors, including readiness to take 200-level math, the semester the psychology major is started and other majors or minors the student is completing.

Students are encouraged to meet regularly with their psychology academic adviser to plan their personal course schedule. Because of course sequencing requirements, even with the most compressed program, a minimum of five semesters (or four semesters and summer school) is required to complete the psychology major.

First Year

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**¹

PSYC 101. General Psychology [C5SD] **Credits: 3.00**

General Education, B.S. degree requirement and/or minor program courses
Credits: 24.00

First Year Total: 30 Credit Hours

Second Year

PSYC 210. Psychological Measurement and Statistics **Credits: 4.00**²

or

PSYC 212. Psychological Research Design and Data Analysis I **Credits: 4.00**³

PSYC 211. Psychological Research Methods **Credits: 4.00**²

or

PSYC 213. Psychological Research Design and Data Analysis II **Credits: 4.00**³

General Education, B.A. degree requirement and/or minor program courses and/or
Psychology elective courses **Credits: 22.00**

Second Year Total: 30 Credit Hours

Third Year

SS content core courses Credits: 3.00-9.00
NS content core courses Credits: 3.00-9.00
Minor program courses or electives Credits: 12.00-24.00

Third Year Total: 30 Credit Hours

Fourth Year

SS and NS content core courses Credits: 0.00-12.00
Psychology Upper-level Specialty Content Course Credits: 3.00
Psychology 400 level elective Credits: 3.00
Psychology capstone course Credits: 3.00
Psychology, minor program or elective courses Credits: 9.00-21.00

Fourth Year Total: 30 Credit Hours

Footnotes

¹ Any MATH course numbered 205 or above is an acceptable prerequisite for the psychology major.
² Any MATH course numbered 205 or above is a prerequisite for PSYC 210 and PSYC 212. MATH 220 is recommended.
³ PSYC 210 is a prerequisite for PSYC 211.
⁴ PSYC 212 is a prerequisite for PSYC 213.

Program Total: 120 Credit Hours

General Psychology, B.S.

Program Description

A student must complete a minimum of 44 PSYC credits and at least 60 non-PSYC credits.

Admission and Retention Requirements

Students who wish to pursue the psychology major must 1) declare the major and 2) meet admissions requirements.

Deadline for Declaration of Psychology major (B.A., B.S. or 2nd major)

Semester	Deadline
Summer	February 15
Fall	February 15
Spring	September 15 of the previous year

Requests to declare the major after the deadline will be processed the following semester.

Requirements for Admission to the Major

Students interested in completing the psychology major must meet the department's progression standards and be fully admitted to the major. The number of semesters required to complete the program will depend on the timing of the student's admission to psychology and the number of summer courses completed.

Students who meet all of the following criteria will be fully admitted to the major and will be permitted to take psychology major courses. Equivalent courses completed at another university for which the student has earned JMU approved transfer credit are acceptable.

- Complete PSYC 101. General Psychology [C5SD], with a minimum grade of "C." Equivalent courses completed at other institutions that transfer to JMU are acceptable.
- Complete MATH 205, MATH 220, MATH 231, MATH 235 or another acceptable math course with a minimum grade of "C." Equivalent courses completed at other institutions that transfer to JMU are acceptable.
- Complete any General Education Psychology course (PSYC 101, PSYC 122 or PSYC 160) with a minimum grade of "B." Earning a 4 on the AP Psychology exam meets this requirement. With departmental approval, grades from other institutions can fulfill this requirement.
- Complete an online orientation and application, available from the psychology department website.

Declared psychology majors who meet the criteria for admission and register for PSYC 210 or PSYC 212 will be fully admitted to the major. Students not admitted to the major may be admitted in a later semester, once they meet admissions requirements.

Retention

All psychology courses taken must carry a minimum grade of "C-" to apply to the major. A psychology course completed with a grade of "D" may be credited toward graduation requirements but may not be included in courses credited toward the psychology major.

Prerequisites

Psychology majors must complete PSYC 101 and two statistics and research methodology courses (PSYC 210-PSYC 211 or PSYC 212-PSYC 213) before enrolling in courses numbered 330 and above. The prerequisites for PSYC 210 and PSYC 212 are any mathematics course numbered 205 or above and PSYC 101. Some psychology courses numbered 330 and above have specific prerequisites. See course listings for details.

Registration and Assessment

During registration, psychology majors will be given priority for course selection. Graduating majors must participate in assessment activities. Assessment information helps the faculty modify the curriculum to meet student needs.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement (in addition to General Education)	3
Scientific Literacy requirement (in addition to General Education)	3-4
Major requirements including cognate (listed below)	47
University electives	25-26
Total	120

Major Requirements

The courses described below are required of all students pursuing a Bachelor of Science degree.

PSYC 101. General Psychology [C5SD] **Credits: 3.00**

Choose one of the following sequences: 8 Credit Hours

PSYC 210. Psychological Measurement and Statistics **Credits: 4.00** and

PSYC 211. Psychological Research Methods **Credits: 4.00**

or

PSYC 212. Psychological Research Design and Data Analysis I **Credits: 4.00** and

PSYC 213. Psychological Research Design and Data Analysis II **Credits: 4.00**

SS Content Core – Psychology as a Social Science: 9 Credit Hours

Choose at least three of the following:

PSYC 330. Psychology of Personality **Credits: 3.00**

PSYC 335. Abnormal Psychology **Credits: 3.00**

PSYC 345. Social Psychology **Credits: 3.00**

PSYC 365. Developmental Psychology **Credits: 3.00**

NS Content Core – Psychology as a Natural Science: 6 Credit Hours

Choose at least two of the following:

PSYC 375. Sensation and Perception **Credits: 3.00**

or

BIO 375. Sensation and Perception **Credits: 3.00**

PSYC 380. Cognitive Psychology **Credits: 3.00**

PSYC 390. Psychology of Learning **Credits: 3.00**

PSYC 395. Comparative Animal Behavior **Credits: 3.00**

or

BIO 395. Comparative Animal Behavior **Credits: 3.00**

Biopsychology: 3 Credit Hours

PSYC 385. Biopsychology **Credits: 3.00**

or

BIO 385. Biopsychology **Credits: 3.00**

Upper Level Specialty Content Courses: 3 Credit Hours

Choose at least one of the following:

PSYC 400. Advanced Topics in Psychology **Credits: 1.00 – 3.00** ²

PSYC 410. Psychology of the Workplace **Credits: 3.00**

PSYC 415. Forensic Psychology **Credits: 3.00**

PSYC 420. Advanced Psychological Statistics **Credits: 3.00**

PSYC 425. School Psychology **Credits: 3.00**

PSYC 427. Tests and Measurements **Credits: 3.00**

PSYC 428. Educational Psychology **Credits: 3.00**

PSYC 430. Clinical Psychology **Credits: 3.00**

PSYC 435. Community Psychology **Credits: 3.00**

PSYC 450. Psychology of Child Abuse and Neglect **Credits: 3.00**

PSYC 452. Child Psychopathology **Credits: 3.00**

PSYC 460. Community Psychology Within Developing Societies **Credits: 3.00**

PSYC 461. Advanced Study Abroad in Psychology **Credits: 1.00-4.00**

PSYC 475. Psychology of Adulthood **Credits: 3.00**

PSYC 480. Applied Behavior Analysis **Credits: 3.00**

Psychology electives: 9 Credit Hours

At least three hours must be at the 400 level.

Capstone course: 3 Credit Hours

Departmental approval is required for students to enroll in more than one capstone course.

Choose one of the following:

PSYC 492. History of Psychology **Credits: 3.00**

PSYC 493. Laboratory in Psychology **Credits: 3.00**

PSYC 495. Field Placement in Psychology **Credits: 4.00**

PSYC 497. Senior Seminar **Credits: 3.00** ²

PSYC 499A. Honors **Credits: 2.00** ² and

PSYC 499B. Honors **Credits: 2.00** ² and

PSYC 499C. Honors **Credits: 2.00** ²

Sociocultural Competency: 0 Credit Hours

Choose one of the following:³

PSYC 220. Psychology and Culture **Credits: 3.00**

PSYC 308. Health Psychology **Credits: 3.00**

PSYC 310. The Psychology of Women and Gender **Credits: 3.00**

PSYC 320. Diversity Issues in Psychology **Credits: 3.00**

PSYC 325. Counseling Psychology **Credits: 3.00**

PSYC 410. Psychology of the Workplace **Credits: 3.00**

PSYC 460. Community Psychology Within Developing Societies **Credits: 3.00**

Total: 44 Credit Hours

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² Some sections of this course may meet the sociocultural awareness requirement depending on the content; when this course does meet the requirement, it will be listed in the notes section of the course listing in MyMadison.

³ One sociocultural competency course is required. Credit for this course may be counted under one of the other major categories.

Cognate Requirement

Additional Scientific Literacy: 3 Credit Hours

This course must be taken in addition to the General Education and the B.S. degree scientific literacy requirements. This may count toward a second major and/or minor requirements. In total, students take two scientific literacy courses beyond the General Education requirement, one to fulfill the B.S. degree scientific literacy requirements and one to fulfill the General Psychology B.S. degree requirements. Choose a course from the list of courses meeting B.S. degree scientific literacy requirements.

Total: 120 Credit Hours

Recommended Schedule for Majors

The following program sample is intended as a guide. Courses must be taken in the sequence outlined; however, the semester during which a particular course is taken depends on a number of factors, including readiness to take 200-level math, the semester the psychology major is started and other majors or minors the student is completing.

Students are encouraged to meet regularly with their psychology academic adviser to plan their personal course schedule. Because of course sequencing requirements, even with the most compressed program, a minimum of five semesters (or four semesters and summer school) is required to complete the psychology major.

First Year

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00** ¹

PSYC 101. General Psychology [C5SD] **Credits: 3.00**

General Education, B.S. degree requirement and/or minor program courses **Credits: 24.00**

First Year Total: 30 Credit Hours

Second Year

PSYC 210. Psychological Measurement and Statistics **Credits: 4.00** ^{2,3}

or

PSYC 212. Psychological Research Design and Data Analysis I **Credits: 4.00** ²

PSYC 211. Psychological Research Methods **Credits: 4.00** ³

or

PSYC 213. Psychological Research Design and Data Analysis II **Credits: 4.00** ⁴

General Education, B.S. degree requirement, B.S. psychology cognate, minor program and/or psychology elective courses **Credits: 22.00**

Second Year Total: 30 Credit Hours

Third Year

PSYC 385. Biopsychology **Credits: 3.00** ⁵

SS content core courses **Credits: 3.00-9.00**

NS content core courses **Credits: 3.00-6.00**

Minor program courses or electives **Credits: 12.00-21.00**

Third Year Total: 30 Credit Hours

Fourth Year

SS and NS content courses **Credits: 0.00-9.00**

Psychology upper-level specialty content course **Credits: 3.00**

Psychology 400-level elective **Credits: 3.00**

Psychology capstone course **Credits: 3.00**

Psychology, minor program or elective courses **Credits: 12.00-21.00**

Fourth Year Total: 30 Credit Hours

Footnotes

¹ A preliminary math course may be suggested after placement examinations. If suggested, the preliminary course should be taken first semester and MATH 220 second semester. Other 200-level mathematics courses may be substituted for MATH 220. Any MATH course numbered 205 or above is an acceptable prerequisite for the psychology major.

² Any MATH course numbered 205 or above is a prerequisite for PSYC 210 and PSYC 212. MATH 220 is recommended.

³ PSYC 210 is a prerequisite for PSYC 211.

⁴ PSYC 212 is a prerequisite for PSYC 213.

⁵ PSYC 385 may be taken during the third or fourth year.

Program Total: 120 Credit Hours

Psychology (See General Psychology)

General Psychology, B.A.

General Psychology, B.S.

Department of Social Work

Simon Funge, **Academic Unit Head**

Phone: (540) 568-6980

Email: SOWK@jmu.edu

Location: Health and Behavioral Studies Building, Room 2084

Website: <http://www.jmu.edu/socwork>

Professors

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S. Funge, K. Myers, N. Poe

Assistant Professors

S. Isom, H. Kang, N. Miller

Mission Statement

The Department of Social Work prepares generalist social workers committed to strengthening community life for diverse individuals, families, groups and organizations and promoting social justice through advocacy and action.

The department offers a B.S.W. degree program accredited by the Council on Social Work Education. In addition, it offers two minors in family studies (with family ecology or gerontology foci) and nonprofit studies.

The Department of Social Work is committed to:

- Preparing students to work effectively in a broad spectrum of social service agencies to address poverty, and challenge multiple forms of oppression, social injustice, and other human rights violations.
- Preparing students for life-long professional learning and advanced academic study by providing an environment geared toward achieving academic excellence.
- Advancing excellence and integrity through the development of high-quality academic programs through high-impact teaching and engaged learning.
- Making contributions to professional knowledge through varied forms of scholarship.
- Responding to the profession and communities by providing service and continuing education opportunities.

Career Opportunities and Marketable Skills

Career Opportunities

- Aging services
- Child and adult day care centers
- Children and youth services
- Community action agencies
- Criminal justice agencies
- Domestic violence programs
- Family service agencies
- Homeless shelters
- Hospitals/home health programs/hospices
- Income maintenance programs
- Legal services agencies
- Behavioral and mental health services
- Services to people with developmental disabilities
- Nursing homes and residential communities
- Public child welfare/child protection services
- Residential treatment facilities
- School programs
- Substance use programs
- Vocational rehabilitation services

Marketable Skills

- Advocacy

- Assessment
- Case management/brokering
- Communication
- Community outreach
- Crisis intervention
- Group facilitation
- Intake/referral
- Intervention/service planning
- Interviewing
- Networking
- Policy analysis
- Problem solving
- Program development/evaluation
- Recording/writing
- Relationship-building/interpersonal
- Research
- Service provision
- Team/group/collaborative

Co-curricular Activities and Organizations

The Social Work Organization (SWO) offers the opportunity to socialize, meet professionals and volunteer in the community. Membership in SWO is open to any student interested in a career in the helping professions.

Phi Alpha Honor Society is to promote academic excellence among social work students. Membership in Phi Alpha is by invitation to students with a minimum of nine credit hours in required social work course holding a major grade point average (GPA) of 3.25 and a cumulative GPA of 3.0.

Admission and Retention Requirements

Information on admission to programs within the Department of Social Work, retention and minimum grade requirements may be found on the individual program pages listed below:

Social Work, B.S.W.

Program Description

The BSW program prepares social workers who are committed to addressing a broad range of social challenges, enhancing individual, family, group, organization and community well-being, and advocating for empowerment of diverse and vulnerable populations. The BSW program graduates competent social workers who are highly prepared for generalist professional practice as well as graduate education through exemplary commitment to ethical practice; diversity, equity and inclusion; human rights; and social, economic and environmental justice.

Admission and Retention Requirements

Admission Requirements

Social Work Program

Students may declare a major in social work at any time; however, they must apply for admission to the social work program the semester following completion of SOWK 287. Intro to Social Work and SOWK 288. Human Rights,

Social, Economic and Environmental Justice. For unconditional admittance, students must have a minimum cumulative GPA of 2.0 with no single grade lower than a "C" (2.0) in SOWK 287 and SOWK 288, and have completed the 20 hours of community service work required in SOWK 287. Students are evaluated on the basis of community service and life experiences, academic performance, communication skills, work-related habits, ability to work with others, motivation, value orientation and career plans. Students must complete this process or admission to upper-level courses will be restricted. See the Social Work Handbook or the social work website for guidelines.

Applications are reviewed by two or more social work faculty members who make a recommendation to the head of the social work department. The student will be notified of the decision in writing. Decisions are to admit, to admit conditionally, not to admit or to defer decision. You will have one opportunity per semester to resubmit the application. If you fail to submit or resubmit a document that is still incorrect, you will be required to wait until the next semester deadline to resubmit. While this could potentially slow your progression in the major, it acknowledges your role of accountability in the process, a quality that will be essential for professional practice.

If admitted conditionally, the conditions for acceptance will be described. If the decision is deferred, the student will be notified in writing as to why. If not admitted, the student may appeal the decision to the head of the Department of Social Work.

Field Practicum Application

Students eligible for the field practicum are seniors who have completed the core social work requirements with no grade lower than a "C" (2.0) in SOWK 287, SOWK 288, SOWK 305, SOWK 317, SOWK 320, SOWK 335, SOWK 465, SOWK 466, SOWK 467, SOWK 493 and IPE 415, who have an overall minimum GPA of 2.0, and who have completed 50 community service hours related to human services after SOWK 287.

During the field practicum, students spend four days a week for one semester completing a minimum of 472 hours of directed field practice. Students seeking admission to SOWK 481. Social Work Field Practicum I and SOWK 482. Social Work Field Practicum II must complete a field placement application and interview with the director of field placement. The field placement director, with the assistance of social work faculty members, will determine the acceptance and placement of students.

See the Social Work Student Handbook or the social work website for the field application, documentation of community service guidelines and guidelines for the placement process. Students must have no grade lower than a "C" (2.0) in SOWK 481, SOWK 482 and SOWK 494, which is taken concurrently with the field practicum.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education courses ¹	41
Social Work core courses	44

Degree Requirements	Credit Hours
Social Work electives at the 300/400 level	6
Electives	29
Total	120

Major Requirements

- SOWK 287. Intro to Social Work **Credits: 3.00**
- SOWK 288. Human Rights, Social, Economic and Environmental Justice **Credits: 3.00**
- SOWK 305. Social Work Research Methods **Credits: 3.00**
- SOWK 317. Skills for Generalist Social Work **Credits: 3.00**
- SOWK 320. Human Behavior in the Social Environment **Credits: 3.00**
- SOWK 335. Social Policy **Credits: 3.00**
- SOWK 465. Social Work Practice in Mezzo Systems **Credits: 3.00**
- SOWK 466. Social Work Practice in Micro Systems **Credits: 3.00**
- SOWK 467. Social Work Practice in Macro Systems **Credits: 3.00**
- SOWK 481. Social Work Field Practicum I **Credits: 6.00**
- SOWK 482. Social Work Field Practicum II **Credits: 6.00**
- SOWK 493. Professional Forum I: Preparation for Field **Credits: 1.00**
- SOWK 494. Professional Forum II: Transition to Professional Practice **Credits: 3.00**
- SOWK Electives at the 300/400 level: Elective courses are offered on a rotating basis. **Credits: 6.00**
- IPE 415. Ethical Decision-Making in Healthcare: an Interprofessional Approach **Credits: 1.00**

Major Requirements Total: 50 Credit Hours

Additional Information

The minimum requirement for the B.S.W. degree is completion of the General Education requirements, 44 credit hours of core social work courses, prerequisite courses as specified in course descriptions and elective hours, six of which must be in social work at the 300/400 level, for a total of 120 credit hours. If a grade of "C" (2.0) or above is not achieved the first time a social work course is taken, the student may repeat the course only once. All social work majors are expected to abide by the NASW Code of Ethics. Additionally, all majors participate in social work student outcome assessment measures.

Footnote

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

Recommended Schedule for Majors

First Year

Madison Foundations (formerly Cluster One: Skills for the 21st Century) **Credits: 9.00-12.00**
 General Education courses **Credits: 18.00-21.00** ¹

Total: 27-33 Credit Hours

Second Year

SOWK 287. Intro to Social Work **Credits: 3.00**
SOWK 288. Human Rights, Social, Economic and Environmental Justice **Credits: 3.00**
General Education courses **Credits 10.00-13.00**¹
Electives **Credits: 11.00-14.00**

Total: 27-33 Credit Hours

Third Year

SOWK 305. Social Work Research Methods **Credits: 3.00**²
SOWK 317. Skills for Generalist Social Work **Credits: 3.00**
SOWK 320. Human Behavior in the Social Environment **Credits: 3.00**²
SOWK 335. Social Policy **Credits: 3.00**²
SOWK elective **Credits: 3.00**
Electives **Credits: 15.00**

Total: 30 Credit Hours

Fourth Year

SOWK 465. Social Work Practice in Mezzo Systems **Credits: 3.00**²
SOWK 466. Social Work Practice in Micro Systems **Credits: 3.00**²
SOWK 467. Social Work Practice in Macro Systems **Credits: 3.00**²
IPE 415. Ethical Decision-Making in Healthcare: an Interprofessional Approach **Credits: 1.00**
SOWK 493. Professional Forum I: Preparation for Field **Credits: 1.00**
SOWK elective **Credits: 3.00**
Elective **Credits: 3.00**
SOWK 481. Social Work Field Practicum I **Credits: 6.00**²
SOWK 482. Social Work Field Practicum II **Credits: 6.00**²
SOWK 494. Professional Forum II: Transition to Professional Practice **Credits: 3.00**²

Total: 32 Credit Hours

Footnotes

¹ Certain General Education courses may also meet prerequisite requirements for social work courses. Pay close attention to General Education requirements when selecting the following courses: MATH 220, Cluster 3; ANTH 195, POSC 225 and SOCI 110, Cluster 4; PSYC 101 and PSYC 160, Cluster 5.

² Check prerequisite requirements.

Department of Sociology and Anthropology

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Professors

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Associate Professors

D. Blanton, C. Colocousis, R. Howes-Mischel, L. Porter, J. Solometo, D. Trouille

Assistant Professors

E. Duran, D. Hu, B. Walter, S. Yaussy

Affiliated Cross Disciplinary Program:

- Historical Archaeology Minor

Anthropology Minor

Anthropology Minor

Students complete a minor in anthropology by completing 18 hours in anthropology including the core courses ANTH 195. Cultural Anthropology [C4GE]; ANTH 196. Biological Anthropology [C3NS] and ANTH 197. Archaeology. Students must receive a minimum grade of "C-" in a class to have it count toward the minor.

Anthropology Course Designations

Archaeology (A)

ANTH 197. Archaeology **Credits: 3.00**
ANTH 205. Buried Cities, Lost Tribes: The Rise and Fall of Early Human Societies [C2HQC] **Credits: 3.00**
ANTH 250. Anthropology of the American Southwest **Credits: 3.00**
ANTH 307. Climate, Culture and Change **Credits: 3.00**
ANTH 311. Archaeology of Virginia **Credits: 3.00**
ANTH 312. The Native Americans **Credits: 3.00**
ANTH 325. Aztec, Maya and Their Predecessors **Credits: 3.00**
ANTH 327. Ancient North American Civilizations **Credits: 3.00**
ANTH 331. Historical Archaeology **Credits: 3.00**
ANTH 366. Anthropology of War **Credits: 3.00**
ANTH 391. Study Abroad **Credits: 1.00 - 6.00**
ANTH 395. Special Topics in Anthropology **Credits: 3.00**
ANTH 410. Spatial Analysis for Anthropologists **Credits: 4.00**
ANTH 455. Archaeology: Methods of Analysis and Interpretation **Credits: 4.00**

ANTH 486. Internship in Anthropology **Credits: 1.00 - 6.00**
 ANTH 490. Special Studies in Anthropology **Credits: 1.00 - 3.00**
 ANTH 492. History from Things: Material Culture **Credits: 3.00**
 ANTH 494. Field Techniques in Archaeology **Credits: 4.00 - 8.00**
 ANTH 496. Research Thesis **Credits: 3.00**
 ANTH 499. Honors Thesis **Credits: 6.00**

Biological Anthropology (B)

ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**
 ANTH 315. Human Evolution **Credits: 3.00**
 ANTH 316. Human Evolutionary Psychology **Credits: 3.00**
 ANTH 317. Primate Evolutionary Ecology **Credits: 3.00**
 ANTH 318. The Evolution of Primate Sexuality and Reproduction **Credits: 3.00**
 ANTH 319. Human Osteology **Credits: 3.00**
 ANTH 352. Birth, Death, Sex: Exploring Demography **Credits: 3.00**
 ANTH 391. Study Abroad **Credits: 1.00 - 6.00**
 ANTH 395. Special Topics in Anthropology **Credits: 3.00**
 ANTH 410. Spatial Analysis for Anthropologists **Credits: 4.00**
 ANTH 415. Anthropological Genetics **Credits: 3.00**
 ANTH 430. Primate Conservation Biology **Credits: 3.00**
 ANTH 445. Methods and Research Perspectives in Biological Anthropology **Credits: 4.00**
 ANTH 486. Internship in Anthropology **Credits: 1.00 - 6.00**
 ANTH 490. Special Studies in Anthropology **Credits: 1.00 - 3.00**
 ANTH 499. Honors Thesis **Credits: 6.00**

Cultural Anthropology (C)

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**
 ANTH 265. Peoples and Cultures of Latin America and the Caribbean **Credits: 3.00**
 ANTH 280. Peoples and Cultures of Sub-Saharan Africa **Credits: 3.00**
 ANTH 295. People and Cultures of East Asia **Credits: 3.00**
 ANTH 300. The Anthropology of Food **Credits: 3.00**
 ANTH 305. Language and Culture **Credits: 3.00**
 ANTH 306. Japanese Society and Culture **Credits: 3.00**
 ANTH 323. Anthropology and Photography **Credits: 3.00**
 ANTH 324. Mindfulness and Anthropology **Credits: 3.00**
 ANTH 350. Magic, Witchcraft and Religion **Credits: 3.00**
 ANTH 352. Birth, Death, Sex: Exploring Demography **Credits: 3.00**
 ANTH 360. Medical Anthropology **Credits: 3.00**
 ANTH 364. U.S./Latin American Borders **Credits: 3.00**
 ANTH 366. Anthropology of War **Credits: 3.00**
 ANTH 368. Contemporary American Culture **Credits: 3.00**
 ANTH 370. Topics in the Anthropology of Gender **Credits: 3.00**
 ANTH 375. Anthropological Theory **Credits: 3.00**
 ANTH 376. Anthropology of Reproduction **Credits: 3.00**
 ANTH 377. Space/Culture/Power **Credits: 3.00**
 ANTH 388. Prisons, Punishment and the State **Credits: 3.00**
 ANTH 389. Ethnographic Experience in Dominica **Credits: 3.00**
 ANTH 390. Topics in Cultural Studies **Credits: 3.00**
 ANTH 391. Study Abroad **Credits: 1.00 - 6.00**
 ANTH 395. Special Topics in Anthropology **Credits: 3.00**
 ANTH 405. Topics in Linguistic Anthropology **Credits: 3.00**
 ANTH 410. Spatial Analysis for Anthropologists **Credits: 4.00**

ANTH 411. Topics in Ethnographic Film **Credits: 3.00**
 ANTH 435. Ethnographic Genres and Methods **Credits: 4.00**
 ANTH 436. Afro-Latin America **Credits: 3.00**
 ANTH 486. Internship in Anthropology **Credits: 1.00 - 6.00**
 ANTH 490. Special Studies in Anthropology **Credits: 1.00 - 3.00**
 ANTH 499. Honors Thesis **Credits: 6.00**

Field Experience (F)

ANTH 391. Study Abroad **Credits: 1.00 - 6.00**
 ANTH 435. Ethnographic Genres and Methods **Credits: 4.00**
 ANTH 455. Archaeology: Methods of Analysis and Interpretation **Credits: 4.00**
 ANTH 494. Field Techniques in Archaeology **Credits: 4.00 - 8.00**

Required for All Anthropology Majors (R)

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**
 ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**
 ANTH 197. Archaeology **Credits: 3.00**
 ANTH 201. The Discipline of Anthropology **Credits: 1.00**
 ANTH 375. Anthropological Theory **Credits: 3.00**

Writing Intensive (W)

ANTH 375. Anthropological Theory **Credits: 3.00**

Sociology Minor

Sociology Minor

To minor in sociology, a student must complete a minimum of 18 credit hours of sociology course work including three core credit hours and 15 elective credit hours.

Core Requirements

SOCI 200. Development of Sociological Thought and Method **Credits: 3.00**
 Sociology electives *15 Credit Hours*

Total: 18 Credit Hours

Anthropology, B.A.

Program Description

Anthropology's goal is to document the diversity of ways humans live and have lived throughout the world. Anthropologists go "off road," working directly with people and their artifacts, to examine their beliefs and values, how they make a living, how they express themselves, how they interact, and how they affect and are affected by the natural world.

Why is this important? An increasingly globalized and multicultural world requires anthropological knowledge and insight. Anthropology is essential to students interested in working in both the U.S. and overseas on contemporary

issues in areas such as social policy work, international development, public health, community-based advocacy, environmental and social justice, and cultural preservation.

Students develop their interests by taking a wide range of classes in cultural, linguistic and biological anthropology and archaeology. Anthropology majors can also do individually-driven practical and hands-on research in internships, anthropology labs, excavations and field-schools, and study-abroad programs.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
University electives (beyond major)	25-39
Major requirements (listed below)	41
Total	120

Major Requirements

To earn a B.A. or B.S. degree in anthropology, students complete 41 credit hours in the major. Given the diverse opportunities the discipline provides, the major is designed to allow students the opportunity to work closely with their advisers to develop a curriculum appropriate to their personal and professional interests. Those students wishing to do so may elect to pursue a concentration in one of the three sub-disciplines of cultural, biological or archaeological anthropology.

Minimum Grades

The concentrations guide students in choosing courses to enhance opportunities for graduate school or allow them to pursue an area of personal interest within the larger discipline of anthropology. Up to two elective courses from a discipline outside of anthropology may be applied to the major. Elective courses from outside of the program must be approved by the student's adviser and must be at the 300- or 400-level. Students must receive a minimum grade of "C-" in a class to have it count toward the major.

Anthropology Concentrations

General Concentration

The general program provides students with a holistic introduction to the breadth of anthropology highlighting experience in the subdisciplines of cultural, archaeological and biological anthropology, as well as introductory experiences in linguistics. The program is designed to provide students with a well-rounded understanding of the discipline in preparation for advanced graduate training or as an adjunct to their personal and professional aspirations.

Required General Concentration Courses

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**

ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**

ANTH 197. Archaeology **Credits: 3.00**

ANTH 201. The Discipline of Anthropology **Credits: 1.00**

ANTH 375. Anthropological Theory **Credits: 3.00** ¹

One elective from each of the following: cultural anthropology, biological anthropology and archaeology **Credits: 9.00**

Other electives **Credits: 15.00** ^{2,3}

One course from the following: 4 Credit Hours

ANTH 435. Ethnographic Genres and Methods **Credits: 4.00**

ANTH 445. Methods and Research Perspectives in Biological Anthropology **Credits: 4.00**

ANTH 455. Archaeology: Methods of Analysis and Interpretation **Credits: 4.00**

Total: 41 Credit Hours

Footnotes

¹ Students should take two of ANTH 195, ANTH 196 or ANTH 197 and at least one anthropology elective before taking ANTH 375.

² Students may take up to two adviser approved electives at the 300 or 400 level from courses outside the program.

³ Students should consider including ANTH 305 as one of their electives.

Archaeology Concentration

Archaeology is the study of the development and change of human societies from the prehistoric past to the present through the recovery, analysis and interpretation of material remains. Our program emphasizes an anthropological approach to archaeology and has close ties to anthropology's other subdisciplines. Archaeology has developed its own body of theories and methods for addressing the human story, many of which are focused on understanding what human material culture reveals about peoples' lives. The archaeology concentration builds student expertise in a variety of areas of archaeological practice, including field methods, the analysis and interpretation of archaeological data, and an understanding of the culture histories of many world regions. Elective courses and independent projects allow students to explore a variety of facets of archaeological theory and practice, with an emphasis on hands-on experience and engagement with real world data and artifacts. Students work with faculty to determine what electives within and outside the program best serve their scholarly and professional interests. Archaeology concentrators can benefit from expertise gained in upper-level electives in history, the geographic sciences, geology, art history, and biology. Intensive training in field methods, though not required for the concentration, is strongly encouraged and is provided by a summer archaeological field school. Those interested in historical archaeology should consider the cross-disciplinary Historical Archaeology Minor.

Required Archaeology Concentration Courses

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**

ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**
 ANTH 197. Archaeology **Credits: 3.00**
 ANTH 201. The Discipline of Anthropology **Credits: 1.00**
 ANTH 375. Anthropological Theory **Credits: 3.00**
 ANTH 455. Archaeology: Methods of Analysis and Interpretation **Credits: 4.00**
 One upper division course in cultural and biological anthropology *Credits: 6.00*
 Electives *Credits: 11.00 – 12.00*³

Choose One:

ANTH 410. Spatial Analysis for Anthropologists **Credits: 4.00**²
 ANTH 490. Special Studies in Anthropology **Credits: 1.00 – 3.00**²

One Regional Archaeology Course: 3 Credit Hours

ANTH 250. Anthropology of the American Southwest **Credits: 3.00**
 ANTH 303. Andean Archaeology **Credits: 3.00**
 ANTH 311. Archaeology of Virginia **Credits: 3.00**
 ANTH 327. Ancient North American Civilizations **Credits: 3.00**

Total: 41 Credit Hours

Footnotes

¹ Students should take two of ANTH 195, ANTH 196 or ANTH 197 and at least one anthropology elective before taking ANTH 375.

² Students electing to take ANTH 490 to satisfy this requirement will complete a project that requires the analysis and interpretation of archaeological data. This course requires permission of instructor and must be taken for 3 credits. Total credits for the archaeology concentration must still add to at least 41.

³ Students may take up to two adviser-approved electives at the 300 or 400 level from courses outside of the program. GEOL 442, ARTH 396/HIST 396 and ARTH 394/HIST 394 are particularly recommended.

Biological Anthropology Concentration

The focus of biological anthropology is the study of human biology from an evolutionary perspective. Biological anthropology is interested in understanding how and why the human species became what it is today. Thus, it involves the study of human evolution, human biology and its variation, human ecology (how humans interrelate with their environment) and primate behavior and biology (to place humans in the proper comparative context). Biological anthropologists also recognize that human culture, and learned behavior in general, are fundamentally important to understanding the human condition which leads them to emphasize a bio-cultural approach in which both biology and culture are integrated into a holistic understanding of humanity. Students work closely with biological anthropology faculty to choose electives from both within and outside of the department to refine their own research and scholarly interests. Upper-level electives in biology, psychology and/or geographic sciences are recommended depending on the student's particular goals. Students might consider taking a minor or second major in these disciplines. Students are strongly encouraged to gain practical experience in biological anthropology through study abroad, internships or independent study with faculty.

Required Biological Anthropology Concentration Courses

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**
 ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**
 ANTH 197. Archaeology **Credits: 3.00**
 ANTH 201. The Discipline of Anthropology **Credits: 1.00**
 ANTH 375. Anthropological Theory **Credits: 3.00**¹
 ANTH 445. Methods and Research Perspectives in Biological Anthropology **Credits: 4.00**
 One upper-division course in archaeology and cultural anthropology *Credits: 6.00*
 Electives *Credits: 12.00*^{2,3}

Choose two of the following courses: 6 Credit Hours

ANTH 315. Human Evolution **Credits: 3.00**
 ANTH 316. Human Evolutionary Psychology **Credits: 3.00**
 ANTH 317. Primate Evolutionary Ecology **Credits: 3.00**
 ANTH 319. Human Osteology **Credits: 3.00**

Total: 41 Credit Hours

Footnotes

¹ Students should take two of ANTH 195, ANTH 196 or ANTH 197 and at least one anthropology elective before taking ANTH 375.

² Students may take up to two adviser approved electives at the 300 or 400 level from courses outside of the program. BIO 270/BIO 270L and BIO 290/BIO 290L are accepted electives.

³ In addition to biological anthropology courses, students are encouraged to take electives from across the breadth of cultural and linguistic anthropology and archaeology.

Cultural Anthropology Concentration

Cultural anthropology is at the core of anthropology. It provides students with in-depth experience in the interpretation and comparison of cultures. It is closely linked to the humanities and to other social sciences. Students learn what culture is, how different cultural systems and forms of social organization work, how language both reflects and constitutes culture, and methodological and theoretical frameworks for interpreting cultural differences and similarities. Students work closely with cultural anthropology faculty to choose a series of electives from both within and outside of the department to refine their own research interests.

Students are encouraged (but not required) to become proficient in a foreign language beyond the level required for the B.A. and to develop a regional area of specialization through course work or a minor (e.g., Latin American studies, Africana studies, Middle Eastern studies, Asian studies). Outside upper-level electives are recommended in history, sociology, economics, religion, modern foreign languages and political science. Students are encouraged to pursue study abroad, ethnographic field school and internship opportunities.

Required Cultural Anthropology Concentration Courses

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**
ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**
ANTH 197. Archaeology **Credits: 3.00**
ANTH 201. The Discipline of Anthropology **Credits: 1.00**
ANTH 375. Anthropological Theory **Credits: 3.00**¹
ANTH 435. Ethnographic Genres and Methods **Credits: 4.00**
One upper-division course in archaeology and cultural anthropology *Credits: 6.00*
Electives *Credits: 15.00*^{2,3}

One Regional Cultural Anthropology Course: 3 Credit Hours

ANTH 265. Peoples and Cultures of Latin America and the Caribbean **Credits: 3.00**
ANTH 280. Peoples and Cultures of Sub-Saharan Africa **Credits: 3.00**
ANTH 295. People and Cultures of East Asia **Credits: 3.00**
ANTH 306. Japanese Society and Culture **Credits: 3.00**
ANTH 364. U.S./Latin American Borders **Credits: 3.00**
ANTH 368. Contemporary American Culture **Credits: 3.00**
ANTH 389. Ethnographic Experience in Dominica **Credits: 3.00**
ANTH 436. Afro-Latin America **Credits: 3.00**

Total: 41 Credit Hours

Footnotes

¹ Students should take two of ANTH 195, ANTH 196 or ANTH 197 and at least one anthropology elective before taking ANTH 375.

² Students may take up to two adviser approved electives at the 300 or 400 level from courses outside of the program.

³ Suggested electives include ANTH 305, additional area studies courses and upper-level topical courses.

Recommended Schedule for Majors

Transfer students on a two-year course of study should change "Year" in this sequence to "Semester."

The following is an example of a four-year course of study for a student seeking a degree in anthropology:

First Year

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**
ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**
ANTH 197. Archaeology **Credits: 3.00**
General Education, B.A. degree requirements, and/or university electives *Credits: 21.00*

First Year Total: 30 Credit Hours

Second Year

ANTH 201. The Discipline of Anthropology **Credits: 1.00**
Anthropology electives and/or concentration courses *Credits: 6.00-9.00*
General Education, B.A. degree requirements, and/or university electives *Credits: 20.00-23.00*

Second Year Total: 30 Credit Hours

Third Year

ANTH 375. Anthropological Theory **Credits: 3.00**
General Education, B.A. degree requirements, and/or university electives *Credits: 18.00-21.00*

Third Year Total: 30 Credit Hours

Fourth Year

ANTH 435. Ethnographic Genres and Methods **Credits: 4.00**
or
ANTH 445. Methods and Research Perspectives in Biological Anthropology **Credits: 4.00**
or
ANTH 455. Archaeology: Methods of Analysis and Interpretation **Credits: 4.00**
Anthropology electives and/or concentration courses *Credits: 6.00-9.00*
General Education, B.A. degree requirements, and/or university electives *Credits: 17.00-20.00*

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Anthropology, B.S.

Program Description

Anthropology's goal is to document the diversity of ways humans live and have lived throughout the world. Anthropologists go "off road," working directly with people and their artifacts, to examine their beliefs and values, how they make a living, how they express themselves, how they interact, and how they affect and are affected by the natural world.

Why is this important? An increasingly globalized and multicultural world requires anthropological knowledge and insight. Anthropology is essential to students interested in working in both the U.S. and overseas on contemporary issues in areas such as social policy work, international development, public health, community-based advocacy, environmental and social justice, and cultural preservation.

Students develop their interests by taking a wide range of classes in cultural, linguistic and biological anthropology and archaeology. Anthropology majors can also do individually-driven practical and hands-on research in internships, anthropology labs, excavations and field-schools, and study-abroad programs.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement ²	3
Scientific Literacy requirement ²	3-4
University electives	35-36
Major requirements (listed below) and electives	41
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.

² MATH 220 is strongly recommended for those students who have not taken that course or an equivalent as part of their General Education.

Major Requirements

To earn a B.A. or B.S. degree in anthropology, students complete 41 credit hours in the major. Given the diverse opportunities the discipline provides, the major is designed to allow students the opportunity to work closely with their advisers to develop a curriculum appropriate to their personal and professional interests. Those students wishing to do so may elect to pursue a concentration in one of the three sub-disciplines of cultural, biological or archaeological anthropology.

Minimum Grades

The concentrations guide students in choosing courses to enhance opportunities for graduate school or allow them to pursue an area of personal interest within the larger discipline of anthropology. Up to two elective courses from a discipline outside of anthropology may be applied to the major. Elective courses from outside of the program must be approved by the student's adviser and must be at the 300- or 400-level. Students must receive a minimum grade of "C-" in a class to have it count toward the major.

Anthropology Concentrations

General Concentration

The general program provides students with a holistic introduction to the breadth of anthropology highlighting experience in the subdisciplines of cultural, archaeological and biological anthropology, as well as introductory experiences in linguistics. The program is designed to provide students with a well-rounded understanding of the discipline in preparation for advanced graduate training or as an adjunct to their personal and professional aspirations.

Required General Concentration Courses

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**
ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**
ANTH 197. Archaeology **Credits: 3.00**
ANTH 201. The Discipline of Anthropology **Credits: 1.00**
ANTH 375. Anthropological Theory **Credits: 3.00** ¹
One elective from each of the following: cultural anthropology, biological anthropology and archaeology **Credits: 9.00**
Other electives **Credits: 15.00** ^{2, 3}

One course from the following: 4 Credit Hours

ANTH 435. Ethnographic Genres and Methods **Credits: 4.00**
ANTH 445. Methods and Research Perspectives in Biological Anthropology **Credits: 4.00**
ANTH 455. Archaeology: Methods of Analysis and Interpretation **Credits: 4.00**

Total: 41 Credit Hours

Footnotes

¹ Students should take two of ANTH 195, ANTH 196 or ANTH 197 and at least one anthropology elective before taking ANTH 375.

² Students may take up to two adviser approved electives at the 300 or 400 level from courses outside the program.

³ Students should consider including ANTH 305 as one of their electives.

Archaeology Concentration

Archaeology is the study of the development and change of human societies from the prehistoric past to the present through the recovery, analysis and interpretation of material remains. Our program emphasizes an anthropological approach to archaeology and has close ties to anthropology's other subdisciplines. Archaeology has developed its own body of theories and methods for addressing the human story, many of which are focused on understanding what human material culture reveals about peoples' lives. The archaeology concentration builds student expertise in a variety of areas of archaeological practice, including field methods, the analysis and interpretation of archaeological data, and an understanding of the culture histories of many world regions. Elective courses and independent projects allow students to explore a variety of facets of archaeological theory and practice, with an emphasis on hands-on experience and engagement with real world data and artifacts. Students work with faculty to determine what electives within and outside the program best serve their scholarly and professional interests. Archaeology concentrators can benefit from expertise gained in upper-level electives in history, the geographic sciences, geology, art history, and biology. Intensive training in field methods, though not required for the concentration, is strongly encouraged and is provided by a summer archaeological field school. Those interested in historical archaeology should consider the cross-disciplinary Historical Archaeology Minor.

Required Archaeology Concentration Courses

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**

ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**
 ANTH 197. Archaeology **Credits: 3.00**
 ANTH 201. The Discipline of Anthropology **Credits: 1.00**
 ANTH 375. Anthropological Theory **Credits: 3.00**
 ANTH 455. Archaeology: Methods of Analysis and Interpretation **Credits: 4.00**
 One upper division course in cultural and biological anthropology *Credits: 6.00*
 Electives *Credits: 11.00 – 12.00*³

Choose One:

ANTH 410. Spatial Analysis for Anthropologists **Credits: 4.00**²
 ANTH 490. Special Studies in Anthropology **Credits: 1.00 – 3.00**²

One Regional Archaeology Course: 3 Credit Hours

ANTH 250. Anthropology of the American Southwest **Credits: 3.00**
 ANTH 303. Andean Archaeology **Credits: 3.00**
 ANTH 311. Archaeology of Virginia **Credits: 3.00**
 ANTH 327. Ancient North American Civilizations **Credits: 3.00**

Total: 41 Credit Hours

Footnotes

¹ Students should take two of ANTH 195, ANTH 196 or ANTH 197 and at least one anthropology elective before taking ANTH 375.

² Students electing to take ANTH 490 to satisfy this requirement will complete a project that requires the analysis and interpretation of archaeological data. This course requires permission of instructor and must be taken for 3 credits. Total credits for the archaeology concentration must still add to at least 41.

³ Students may take up to two adviser-approved electives at the 300 or 400 level from courses outside of the program. GEOL 442, ARTH 396/HIST 396 and ARTH 394/HIST 394 are particularly recommended.

Biological Anthropology Concentration

The focus of biological anthropology is the study of human biology from an evolutionary perspective. Biological anthropology is interested in understanding how and why the human species became what it is today. Thus, it involves the study of human evolution, human biology and its variation, human ecology (how humans interrelate with their environment) and primate behavior and biology (to place humans in the proper comparative context). Biological anthropologists also recognize that human culture, and learned behavior in general, are fundamentally important to understanding the human condition which leads them to emphasize a bio-cultural approach in which both biology and culture are integrated into a holistic understanding of humanity. Students work closely with biological anthropology faculty to choose electives from both within and outside of the department to refine their own research and scholarly interests. Upper-level electives in biology, psychology and/or geographic sciences are recommended depending on the student's particular goals. Students might consider taking a minor or second major in these disciplines. Students are strongly encouraged to gain practical experience in biological anthropology through study abroad, internships or independent study with faculty.

Required Biological Anthropology Concentration Courses

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**
 ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**
 ANTH 197. Archaeology **Credits: 3.00**
 ANTH 201. The Discipline of Anthropology **Credits: 1.00**
 ANTH 375. Anthropological Theory **Credits: 3.00**¹
 ANTH 445. Methods and Research Perspectives in Biological Anthropology **Credits: 4.00**
 One upper-division course in archaeology and cultural anthropology *Credits: 6.00*
 Electives *Credits: 12.00*^{2,3}

Choose two of the following courses: 6 Credit Hours

ANTH 315. Human Evolution **Credits: 3.00**
 ANTH 316. Human Evolutionary Psychology **Credits: 3.00**
 ANTH 317. Primate Evolutionary Ecology **Credits: 3.00**
 ANTH 319. Human Osteology **Credits: 3.00**

Total: 41 Credit Hours

Footnotes

¹ Students should take two of ANTH 195, ANTH 196 or ANTH 197 and at least one anthropology elective before taking ANTH 375.

² Students may take up to two adviser approved electives at the 300 or 400 level from courses outside of the program. BIO 270/BIO 270L and BIO 290/BIO 290L are accepted electives.

³ In addition to biological anthropology courses, students are encouraged to take electives from across the breadth of cultural and linguistic anthropology and archaeology.

Cultural Anthropology Concentration

Cultural anthropology is at the core of anthropology. It provides students with in-depth experience in the interpretation and comparison of cultures. It is closely linked to the humanities and to other social sciences. Students learn what culture is, how different cultural systems and forms of social organization work, how language both reflects and constitutes culture, and methodological and theoretical frameworks for interpreting cultural differences and similarities. Students work closely with cultural anthropology faculty to choose a series of electives from both within and outside of the department to refine their own research interests.

Students are encouraged (but not required) to become proficient in a foreign language beyond the level required for the B.A. and to develop a regional area of specialization through course work or a minor (e.g., Latin American studies, Africana studies, Middle Eastern studies, Asian studies). Outside upper-level electives are recommended in history, sociology, economics, religion, modern foreign languages and political science. Students are encouraged to pursue study abroad, ethnographic field school and internship opportunities.

Required Cultural Anthropology Concentration Courses

ANTH 195. Cultural Anthropology [C4GE] Credits: 3.00
ANTH 196. Biological Anthropology [C3NS] Credits: 3.00
ANTH 197. Archaeology Credits: 3.00
ANTH 201. The Discipline of Anthropology Credits: 1.00
ANTH 375. Anthropological Theory Credits: 3.00 ¹
ANTH 435. Ethnographic Genres and Methods Credits: 4.00
One upper-division course in archaeology and cultural anthropology Credits: 6.00
Electives Credits: 15.00 ^{2,3}

One Regional Cultural Anthropology Course: 3 Credit Hours

ANTH 265. Peoples and Cultures of Latin America and the Caribbean Credits: 3.00
ANTH 280. Peoples and Cultures of Sub-Saharan Africa Credits: 3.00
ANTH 295. People and Cultures of East Asia Credits: 3.00
ANTH 306. Japanese Society and Culture Credits: 3.00
ANTH 364. U.S./Latin American Borders Credits: 3.00
ANTH 368. Contemporary American Culture Credits: 3.00
ANTH 389. Ethnographic Experience in Dominica Credits: 3.00
ANTH 436. Afro-Latin America Credits: 3.00

Total: 41 Credit Hours

Footnotes

¹ Students should take two of ANTH 195, ANTH 196 or ANTH 197 and at least one anthropology elective before taking ANTH 375.

² Students may take up to two adviser approved electives at the 300 or 400 level from courses outside of the program.

³ Suggested electives include ANTH 305, additional area studies courses and upper-level topical courses.

Recommended Schedule for Majors

First Year

ANTH 195. Cultural Anthropology [C4GE] Credits: 3.00
ANTH 196. Biological Anthropology [C3NS] Credits: 3.00
ANTH 197. Archaeology Credits: 3.00
General Education, B.S. degree requirements, and/or university electives Credits: 21.00

First Year Total: 30 Credit Hours

Second Year

ANTH 201. The Discipline of Anthropology Credits: 1.00
Anthropology electives and/or concentration courses Credits: 6.00-9.00

General Education, B.S. degree requirements, and/or university electives Credits: 20.00-23.00

Second Year Total: 30 Credit Hours

Third Year

ANTH 375. Anthropological Theory Credits: 3.00
General Education, B.S. degree requirements, and/or university electives Credits: 18.00-21.00

Third Year Total: 30 Credit Hours

Fourth Year

ANTH 435. Ethnographic Genres and Methods Credits: 4.00
or
ANTH 445. Methods and Research Perspectives in Biological Anthropology Credits: 4.00
or
ANTH 455. Archaeology: Methods of Analysis and Interpretation Credits: 4.00
Anthropology electives and/or concentration courses Credits: 6.00-9.00
General Education, B.S. degree requirements, and/or university electives Credits: 17.00-20.00

Fourth Year Total: 30 Credit Hours

Program Total: 120 Credit Hours

Sociology, B.A.

Program Description

The sociology program develops the student's ability to analyze the social world by using diverse sociological theories and research methods. It stresses the importance of social, cultural, and historical contexts for understanding relationships between and among individuals and the social structures that make up societies. Students will gain the ability to think broadly and critically about the diversity of social organization and practice locally and globally. Students will also develop the ability to take a disciplined and scholarly approach to understanding the world in which we live.

The major in sociology strongly develops skills in critical thinking, research, analysis, writing and communication. Sociology students frequently go on to post-graduate education and/or careers in both public and private employment sectors.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41

Degree Requirements	Credit Hours
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
University electives	23-37
Major requirements (listed below) and electives	39
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Language's placement test.

Major Requirements

To earn the B.A. degree with a sociology major, students must complete a minimum of 39 credit hours in sociology. Of these credit hours, 18 are required courses; the remaining 21 credit hours are electives chosen from over 30 sociology courses.

Minimum Grades

Students must earn at least a "C-" in all sociology classes or any course that is substituted for a sociology core course. If a student earns below a "C-" in a course, they can re-take the course once in order to meet the "C-" standard.

SOCI 110. Social Issues in a Global Context [C4GE] **Credits: 3.00**

SOCI 140. Microsociology: The Individual in Society [C5SD] **Credits: 3.00**

SOCI 200. Development of Sociological Thought and Method **Credits: 3.00** ¹

SOCI 231. Introduction to Social Statistics **Credits: 3.00** ²

SOCI 300. Sociological Inquiry **Credits: 3.00** ³

SOCI 480. Senior Seminar in Sociology **Credits: 3.00** ^{4, 5, 6}

Sociology electives **Credits: 21.00**

Total: 39 Credit Hours

Footnotes

¹ Prerequisite for SOCI 200: SOCI 110, SOCI 140 or SOCI 101.

² Students may substitute SOCI 231 with MATH 220, PSYC 210 or COB 191, but must take an additional sociology course to complete the required 39 hours of sociology.

³ Prerequisite for SOCI 300: SOCI 200 and SOCI 231 (or equivalent), sociology majors only.

⁴ Prerequisite for SOCI 480: SOCI 300.

⁵ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

⁶ Students may fulfill the senior seminar requirement by completing a

supervised internship with a substantial writing expectation. Students must secure their own internship placement before enrolling in the internship course and should consult an adviser or the sociology program coordinator for details. Students may also fulfill the senior seminar requirement by successfully completing the SOCI 499A/SOCI 499B/SOCI 499C sequence.

⁷ If a course other than SOCI 231 is used to meet the statistics requirement, 24 elective credits will be required to reach the 39 credit hour total.

Sociology Concentrations

The sociology program encourages majors to select electives that create a coherent program of study suited to their special needs and interests. Such a focus would involve four or more courses from the following concentration groupings: ¹

Communities, Inequalities and Public Policy Concentration

SOCI 280. Social Gerontology **Credits: 3.00**

or

GERN 280. Social Gerontology **Credits: 3.00**

SOCI 303. Sociology of Death and Dying **Credits: 3.00**

SOCI 304. Social Deviance **Credits: 3.00**

SOCI 309. Capitalism and Alternative Economies **Credits: 3.00**

SOCI 311. Sociology of the Environment **Credits: 3.00**

SOCI 318. Sociology of Immigration **Credits: 3.00**

SOCI 321. Politics in Society **Credits: 3.00**

SOCI 322. Sociology of Religion **Credits: 3.00**

or

REL 322. Sociology of Religion **Credits: 3.00**

SOCI 328. Digital Inequality **Credits: 3.00**

SOCI 334. Self and Society **Credits: 3.00**

SOCI 335. Disability and Society **Credits: 3.00**

SOCI 336. Race and Ethnicity **Credits: 3.00**

SOCI 337. Sociology of Gender **Credits: 3.00**

or

WGSS 337. Sociology of Gender **Credits: 3.00**

SOCI 341. Sociology of Education **Credits: 3.00**

SOCI 347. Queer Theories of Gender and Inequality **Credits: 3.00**

SOCI 352. Birth, Death, Sex: Exploring Demography **Credits: 3.00**

or

ANTH 352. Birth, Death, Sex: Exploring Demography **Credits: 3.00**

SOCI 354. Social Inequality **Credits: 3.00**

SOCI 357. Sociology of Disasters **Credits: 3.00**

SOCI 359. The Sociology of Climate Denial **Credits: 3.00**

SOCI 360. Social Movements **Credits: 3.00**

SOCI 367. Sociology of Sexuality **Credits: 3.00**

SOCI 372. Sociology of the Community **Credits: 3.00**

SOCI 374. Sociology of Families **Credits: 3.00**

SOCI 375. Medical Sociology **Credits: 3.00**
SOCI 382. Qualitative Sociology **Credits: 3.00**
SOCI 385. Madness and Society: The Sociology of Mental Health and Illness **Credits: 3.00**
SOCI 386. Sociology of Nonprofit Organizations **Credits: 3.00**

Environments, Technologies and Innovations Concentration

SOCI 309. Capitalism and Alternative Economies **Credits: 3.00**
SOCI 311. Sociology of the Environment **Credits: 3.00**
SOCI 315. Technology and Society **Credits: 3.00**
SOCI 328. Digital Inequality **Credits: 3.00**
SOCI 344. Work and Society **Credits: 3.00**
SOCI 348. Introduction to Developing Societies **Credits: 3.00**
SOCI 354. Social Inequality **Credits: 3.00**
SOCI 357. Sociology of Disasters **Credits: 3.00**
SOCI 359. The Sociology of Climate Denial **Credits: 3.00**
SOCI 360. Social Movements **Credits: 3.00**
SOCI 361. Sociology of Organizations **Credits: 3.00**
SOCI 367. Sociology of Sexuality **Credits: 3.00**
SOCI 375. Medical Sociology **Credits: 3.00**
SOCI 385. Madness and Society: The Sociology of Mental Health and Illness **Credits: 3.00**
SOCI 386. Sociology of Nonprofit Organizations **Credits: 3.00**

Health, Medicine and Society Concentration

SOCI 280. Social Gerontology **Credits: 3.00**
or
GERN 280. Social Gerontology **Credits: 3.00**

SOCI 303. Sociology of Death and Dying **Credits: 3.00**
SOCI 315. Technology and Society **Credits: 3.00**
SOCI 328. Digital Inequality **Credits: 3.00**
SOCI 336. Race and Ethnicity **Credits: 3.00**

SOCI 337. Sociology of Gender **Credits: 3.00**
or
WGSS 337. Sociology of Gender **Credits: 3.00**

SOCI 347. Queer Theories of Gender and Inequality **Credits: 3.00**

SOCI 352. Birth, Death, Sex: Exploring Demography **Credits: 3.00**
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SOCI 357. Sociology of Disasters **Credits: 3.00**

SOCI 367. Sociology of Sexuality **Credits: 3.00**
or
WGSS 367. Sociology of Sexuality **Credits: 3.00**

SOCI 375. Medical Sociology **Credits: 3.00**

SOCI 385. Madness and Society: The Sociology of Mental Health and Illness **Credits: 3.00**
SOCI 386. Sociology of Nonprofit Organizations **Credits: 3.00**

Markets and Cultures Concentration

SOCI 306. Japanese Society and Culture **Credits: 3.00**
SOCI 309. Capitalism and Alternative Economies **Credits: 3.00**
SOCI 315. Technology and Society **Credits: 3.00**
SOCI 318. Sociology of Immigration **Credits: 3.00**
SOCI 329. Sociology of Sport **Credits: 3.00**
SOCI 334. Self and Society **Credits: 3.00**
SOCI 341. Sociology of Education **Credits: 3.00**
SOCI 342. Social Movements in the Middle East **Credits: 3.00**
SOCI 344. Work and Society **Credits: 3.00**
SOCI 358. Sociology of Consumption **Credits: 3.00**
SOCI 361. Sociology of Organizations **Credits: 3.00**
SOCI 363. Sociology of Culture **Credits: 3.00**
SOCI 367. Sociology of Sexuality **Credits: 3.00**
SOCI 368. Contemporary American Culture **Credits: 3.00**
SOCI 382. Qualitative Sociology **Credits: 3.00**
SOCI 386. Sociology of Nonprofit Organizations **Credits: 3.00**

Political and Global Analysis Concentration

SOCI 304. Social Deviance **Credits: 3.00**
SOCI 306. Japanese Society and Culture **Credits: 3.00**
SOCI 309. Capitalism and Alternative Economies **Credits: 3.00**
SOCI 318. Sociology of Immigration **Credits: 3.00**
SOCI 321. Politics in Society **Credits: 3.00**
SOCI 328. Digital Inequality **Credits: 3.00**
SOCI 335. Disability and Society **Credits: 3.00**
SOCI 336. Race and Ethnicity **Credits: 3.00**

SOCI 337. Sociology of Gender **Credits: 3.00**
or
WGSS 337. Sociology of Gender **Credits: 3.00**

SOCI 342. Social Movements in the Middle East **Credits: 3.00**
SOCI 344. Work and Society **Credits: 3.00**
SOCI 347. Queer Theories of Gender and Inequality **Credits: 3.00**
SOCI 348. Introduction to Developing Societies **Credits: 3.00**

SOCI 352. Birth, Death, Sex: Exploring Demography **Credits: 3.00**
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SOCI 359. The Sociology of Climate Denial **Credits: 3.00**
SOCI 360. Social Movements **Credits: 3.00**
SOCI 361. Sociology of Organizations **Credits: 3.00**
SOCI 363. Sociology of Culture **Credits: 3.00**
SOCI 375. Medical Sociology **Credits: 3.00**
SOCI 382. Qualitative Sociology **Credits: 3.00**
SOCI 386. Sociology of Nonprofit Organizations **Credits: 3.00**

Footnote

¹ Within any of the defined concentrations students may gain credits toward completing the concentration through certain special topics or other courses. On occasion, courses taken outside the major or university may qualify. For special topics courses in sociology, see the instructor of record for that course. For other questions or possibilities see an adviser or the sociology program coordinator.

Recommended Schedule for Majors

Transfer students on a two-year course of study should change "Year" in this sequence to "Semester."

The following is an example of a four-year course of study for a student seeking a degree in sociology:

First Year

SOCI 110. Social Issues in a Global Context [C4GE] **Credits: 3.00**
SOCI 140. Microsociology: The Individual in Society [C5SD] **Credits: 3.00**
Sociology electives **Credits: 3.00**

Total: 9 Credit Hours

Second Year

SOCI 200. Development of Sociological Thought and Method **Credits: 3.00**
SOCI 231. Introduction to Social Statistics **Credits: 3.00**
Sociology electives **Credits: 3.00**

Total: 9 Credit Hours

Third Year

SOCI 300. Sociological Inquiry **Credits: 3.00**
Electives **Credits: 6.00 - 9.00**

Total: 9-12 Credit Hours

Fourth Year

SOCI 480. Senior Seminar in Sociology **Credits: 3.00** (*majors take this any time after completing SOCI 300*)
Sociology electives **Credits: 6.00 - 9.00**

Total: 9-12 Credit Hours

Total: 120 Credit Hours

Sociology, B.S.

Program Description

The sociology program develops the student's ability to analyze the social world by using diverse sociological theories and research methods. It stresses the importance of social, cultural, and historical contexts for understanding relationships between and among individuals and the social structures that make up societies. Students will gain the ability to think broadly and critically about the diversity of social organization and practice locally and globally. Students will also develop the ability to take a disciplined and scholarly approach to understanding the world in which we live.

The major in sociology strongly develops skills in critical thinking, research, analysis, writing and communication. Sociology students frequently go on to post-graduate education and/or careers in both public and private employment sectors.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement ²	3
Scientific Literacy requirement ²	3-4
University electives	32-33
Major requirements (listed below)	39
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. The number of credit hours necessary to fulfill these requirements may vary.
² In addition to course work taken to fulfill General Education requirement.

Major Requirements

To earn the B.S. degree with a sociology major, students must complete a minimum of 39 credit hours in sociology. Of these credit hours, 18 are required courses; the remaining 21 credit hours are electives chosen from over 30 sociology courses. Students must observe the prerequisite sequencing of required courses as shown in the course descriptions.

Minimum Grades

Students must earn at least a "C-" in all sociology classes or any course that is substituted for a sociology core course. If a student earns below a "C-" in a course, they can re-take the course once in order to meet the "C-" standard.

SOCI 110. Social Issues in a Global Context [C4GE] **Credits: 3.00**
SOCI 140. Microsociology: The Individual in Society [C5SD] **Credits: 3.00**
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SOCI 480. Senior Seminar in Sociology **Credits: 3.00** ^{4, 5, 6}
Sociology electives **Credits: 21.00** ⁷

Major Requirements Total: 39 Credit Hours

Footnotes

¹ Prerequisite for SOCI 200: SOCI 110, SOCI 140 or SOCI 101.

² Students can substitute SOCI 231 with MATH 220, PSYC 210 or COB 191, but must take an additional sociology course to complete the required 39 hours of sociology.

³ Prerequisite for SOCI 300: SOCI 200 and SOCI 231 (or equivalent), sociology majors only.

⁴ Prerequisite for SOCI 480: SOCI 300.

⁵ This course fulfills the College of Arts and Letters writing-intensive requirement for the major.

⁶ Students may fulfill the senior seminar requirement by completing a supervised internship with a substantial writing expectation. Students must secure their own internship placement before enrolling in the internship course and should consult an adviser or the sociology program coordinator for details. Students may also fulfill the senior seminar requirement by successfully completing the SOCI 499A/SOCI 499B/SOCI 499C sequence.

⁷ If a course other than SOCI 231 is used to meet the statistics requirement, 24 elective credits will be required to reach the 39 credit hour total.

Sociology Concentrations

The sociology program encourages majors to select electives that create a coherent program of study suited to their special needs and interests. Such a focus would involve four or more courses from the following concentration groupings: ¹

Communities, Inequalities and Public Policy Concentration

SOCI 280. Social Gerontology **Credits: 3.00**

or

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SOCI 386. Sociology of Nonprofit Organizations **Credits: 3.00**

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Markets and Cultures Concentration

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SOCI 368. Contemporary American Culture **Credits: 3.00**
SOCI 382. Qualitative Sociology **Credits: 3.00**
SOCI 386. Sociology of Nonprofit Organizations **Credits: 3.00**

Political and Global Analysis Concentration

SOCI 304. Social Deviance **Credits: 3.00**
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SOCI 347. Queer Theories of Gender and Inequality **Credits: 3.00**
SOCI 348. Introduction to Developing Societies **Credits: 3.00**

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SOCI 375. Medical Sociology **Credits: 3.00**
SOCI 382. Qualitative Sociology **Credits: 3.00**
SOCI 386. Sociology of Nonprofit Organizations **Credits: 3.00**

Footnote

¹ Within any of the defined concentrations students may gain credits toward completing the concentration through certain special topics or other courses. On occasion, courses taken outside the major or university may qualify. For special topics courses in sociology, see the instructor of record for that course. For other questions or possibilities see an adviser or the sociology program coordinator.

Recommended Schedule for Majors

Transfer students on a two-year course of study should change "Year" in this sequence to "Semester."

The following is an example of a four-year course of study for a student seeking a degree in sociology:

First Year

SOCI 110. Social Issues in a Global Context [C4GE] **Credits: 3.00**
SOCI 140. Microsociology: The Individual in Society [C5SD] **Credits: 3.00**
Sociology elective **Credits: 3.00**

First Year Total: 9 Credit Hours

Second Year

SOCI 200. Development of Sociological Thought and Method **Credits: 3.00**
SOCI 231. Introduction to Social Statistics **Credits: 3.00**
Sociology elective **Credits: 3.00**

Second Year Total: 9 Credit Hours

Third Year

SOCI 300. Sociological Inquiry **Credits: 3.00**
Electives **Credits: 6.00-9.00**

Third Year Total: 9-12 Credit Hours

Fourth Year

SOCI 480. Senior Seminar in Sociology **Credits: 3.00** (*majors take this any time after completing SOCI 300*)
Sociology electives *Credits: 6.00-9.00*

Fourth Year Total: 9-12 Credit Hours

Program Total: 120 Credit Hours

School of Theatre and Dance

Peter Zazzali, **Director**

Phone: (540) 568-6342

Email: theatredance@jmu.edu

Location: Forbes Center for the Performing Arts

Website: <http://www.jmu.edu/theatredance>

Professors

D. Beck, R. Graciani, S. Miller-Corso, P. Zazzali

Associate Professors

K. Arecchi, E. Becher-McKeever, J. Burgess, R. Corriston, I. De Sanctis, Z. Dorsey, B. Lambert, M. Pardo, B. Smallwood

Assistant Professors

L. Anderson, T. Burns, H. Davis, K. Lumpkin, S. Marland, R. Rhoades, T. Twining

Lecturer

L. Kelley

Mission

The School of Theatre and Dance is rooted in the belief that the relevant artist is the thinking artist who couples the mastery and embodiment of concrete skills with knowledge of and sensitivity to the cultural environments of ideas, artistic forms and other persons. The school trains and educates artists, scholars and teachers in the rich traditions and current practices of dance, theatre and musical theatre. The school's programs blend liberal arts education and critical thinking with intensive pre-professional training and practice. Faculty foster an environment that values and cultivates creative, passionate, disciplined, curious, innovative, engaged, articulate, collaborative and independent-thinking artists and scholars. Committed to a teaching approach that emphasizes mentorship and individual attention to students, faculty members of the school empower students in the development of their own personal strengths, provide them with tools and opportunities to realize their potential, and equip them for successful work in professional environments, graduate programs and to be lifelong learners.

Goals

To realize this mission, the School of Theatre and Dance strives to:

- Develop in students the ability to work productively and sensitively in creative and collaborative processes.
- Offer multiple opportunities for students to self-initiate and self-produce work in a context supportive of experimentation.
- Produce performances and creative experiences of high quality.
- Present performances by and learning experiences with visiting artists.
- Motivate students to take active responsibility for their work, processes and careers.
- Promote, support and enable faculty professional development so that teachers continue to provide the education for students that only growing, current and active creative artists and scholars can provide.
- Inspire and prepare students to be advocates for the arts.
- Foster an understanding of the roles of the artist and the arts in society.
- Advance dynamic partnerships with diverse communities.

Career Opportunities

For information about career opportunities in theatre, dance and musical theatre, contact the appropriate coordinator:

- Theatre Coordinators: Ingrid De Sanctis, desancie@jmu.edu
- Dance Coordinator: Ryan Corriston, corrisrp@jmu.edu
- Musical Theatre Coordinator: Kate Arecchi, arecchkm@jmu.edu

Co-curricular Activities and Organizations

The School of Theatre and Dance offers a number of co-curricular activities and organizations. They allow students to apply and experiment with the theories they learn in the classroom and gain practical experience in their field.

- Alpha Psi Omega
- Associate Dance Ensemble
- BIPOC of STAD
- Contemporary Dance Ensemble
- Dance Studio Productions
- Dance Theatre
- IMPACT
- Madison New Works Lab
- Mainstage Productions
- National Honor Society for Dance Arts
- Stratford Players
- Studio Theatre Productions
- USITT Student Chapter
- Virginia Repertory Dance Company
- Weird Cousins Improv Group
- Workshop Productions

Dance Major; B.A. degree option

Program Description

A dance major must fulfill B.A. degree and major requirements.

Special Admission and Retention Requirements

Admission to the dance, theatre and musical theatre majors are competitive and an audition/interview is required. Please see the School of Theatre and Dance website for more information: <https://www.jmu.edu/theatredance/apply/index.shtml>.

All School of Theatre and Dance majors must complete the requirements for a Bachelor of Arts degree and must complete the General Education program. Theatre/Musical Theatre majors cannot take THEA 210. Introduction to Theatre [C2VPA] to meet the visual and performing arts requirements. Dance majors cannot take DANC 215. The Dance Experience [C2VPA] to meet the visual and performing arts requirement. Courses from other academic units may not be counted both for the School of Theatre and Dance majors and for another major.

A minimum grade of "C" is required in all courses that apply to a major in the School of Theatre and Dance.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
University electives	13-28
Major requirements (listed below)	48-49
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures' placement test.

Major Requirements

All students pursuing a dance major must complete the core requirements.

Core Courses

- STAD 171. Performance Production **Credits: 3.00**
STAD 250. The Collaborative Artist: Sophomore Studio **Credits: 3.00**

Choose one of the following: 2-3 Credit Hours

- DANC 142. Elementary Ballet (0, 4) **Credits: 2.00**

- DANC 143. International Folk Dance (0, 4) **Credits: 2.00** ¹
DANC 144. Ballroom Dance (0, 4) **Credits: 2.00**
DANC 147. Tap Dance (0, 4) **Credits: 2.00**
DANC 325. Dance in Community **Credits: 3.00**
DANC 390. Directed Projects **Credits: 1.00 - 3.00**
THEA 251. Acting I: Basic Acting **Credits: 3.00**

Total: 8-9 Credit Hours

Footnote

¹ DANC 143 fulfills the folk dance requirement for students pursuing dance teacher licensure.

Program Requirements

Core Courses

- Core Courses **Credits: 8.00-9.00**
DANC 245. Dance Improvisation (0, 4) **Credits: 2.00**
DANC 248. History of Dance: Renaissance Through the 20th Century **Credits: 3.00**
DANC 320. Anatomy and Somatic Studies for the Dancer **Credits: 3.00**
DANC 345. Dance Composition I (2, 2) **Credits: 3.00**
DANC 445. Dance Composition II (2, 2) **Credits: 3.00**
DANC 449. The Dance Professional **Credits: 3.00**
DANC 479. Methods of Teaching Dance **Credits: 3.00**

Technique Courses

The student is required to complete 10 credits in modern and four credits in ballet technique, with placement to be assessed in conference with dance faculty. Modern, ballet and jazz technique classes all have an advanced level course in the curriculum. The requirements listed below are the minimum level expected of dance major students. Most majors will take additional technique courses as university electives throughout their study in the dance program.

Two semesters for a total of four credits:

- DANC 240. Intermediate Modern Dance I (0, 4) **Credits: 2.00**

Two semesters for a total of four credits:

- DANC 340. Intermediate Modern Dance II (0, 4) **Credits: 2.00**

One semester for a total of two credits:

- DANC 440. Advanced Modern Dance (0, 4) **Credits: 2.00**

Select four credits from the following courses:

- DANC 242. Intermediate Ballet I (0, 4) **Credits: 2.00**
DANC 342. Intermediate Ballet II (0, 4) **Credits: 2.00**

Ensemble Courses

- DANC 110. Associate Group Dance Repertory I (0, 4) **Credits: 1.00**
DANC 210. Associate Group Dance Repertory II (0, 4) **Credits: 1.00**
DANC 211. Contemporary Dance Ensemble Repertory I (0, 4) **Credits: 2.00**
DANC 311. Contemporary Dance Ensemble Repertory II (0, 4) **Credits: 2.00**

Major Requirements Total: 48-49 Credit Hours

Recommended Schedule for Majors

First Year

DANC 110. Associate Group Dance Repertory I (0, 4) **Credits: 1.00** (fall)
DANC 210. Associate Group Dance Repertory II (0, 4) **Credits: 1.00** (spring)
DANC 240. Intermediate Modern Dance I (0, 4) **Credits: 2.00** (fall and spring, total of 4 credit hours)
DANC 242. Intermediate Ballet I (0, 4) **Credits: 2.00**
DANC 245. Dance Improvisation (0, 4) **Credits: 2.00**
General Education Cluster 1 (three courses): **Credits: 9.00**
Language courses for B.A. requirement (2 courses required): **Credits: 6.00**
STAD 171. Performance Production **Credits: 3.00**

Total: 28 Credit Hours

Second Year

Choose one of the following courses: **Credits: 2.00 - 3.00**
DANC 143. International Folk Dance (0, 4) **Credits: 2.00**
or
DANC 144. Ballroom Dance (0, 4) **Credits: 2.00**
or
DANC 390. Directed Projects **Credits: 1.00 - 3.00**
or
DANC 325. Dance in Community **Credits: 3.00**
DANC 211. Contemporary Dance Ensemble Repertory I (0, 4) **Credits: 2.00** (fall)
DANC 340. Intermediate Modern Dance II (0, 4) **Credits: 2.00** (fall and spring, total of 4 credit hours)
DANC 342. Intermediate Ballet II (0, 4) **Credits: 2.00**
DANC 442. Advanced Ballet (0, 4) **Credits: 2.00** (optional)
DANC 345. Dance Composition I (2, 2) **Credits: 3.00**
DANC 248. History of Dance: Renaissance Through the 20th Century **Credits: 3.00**
Language courses for B.A. requirement (2 courses required): **Credits: 6.00**
University or dance electives: **Credits: 4.00-5.00**
STAD 250. The Collaborative Artist: Sophomore Studio **Credits: 3.00**

Total: 30 Credit Hours

Third Year

DANC 311. Contemporary Dance Ensemble Repertory II (0, 4) **Credits: 2.00**
DANC 312. Virginia Repertory Dance Company II (0, 4) **Credits: 2.00** (optional)
DANC 320. Anatomy and Somatic Studies for the Dancer **Credits: 3.00**
DANC 440. Advanced Modern Dance (0, 4) **Credits: 2.00**
DANC 442. Advanced Ballet (0, 4) **Credits: 2.00** (optional)
DANC 445. Dance Composition II (2, 2) **Credits: 3.00**
General Education and / or degree requirements: **Credits: 12.00**
DANC 479. Methods of Teaching Dance **Credits: 3.00**
University or dance electives: **Credits: 5.00**

Total: 30 Credit Hours

Fourth Year

DANC 411. Contemporary Dance Ensemble Repertory III (0, 4) **Credits: 2.00** (optional)
University or dance electives: **Credits: 6.00**
DANC 449. The Dance Professional **Credits: 3.00**
General Education: **Credits: 23.00**

Total: 32 Credit Hours

Program Total: 120 Credit Hours

Theatre, Musical Theatre Major, B.A.

Program Description

A musical theatre major must fulfill B.A. degree and major requirements.

Special Admission and Retention Requirements

Admission to the dance, theatre and musical theatre majors are competitive and an audition/interview is required. Please see the School of Theatre and Dance website for more information: <https://www.jmu.edu/theatredance/apply/index.shtml>.

All School of Theatre and Dance majors must complete the requirements for a Bachelor of Arts degree and must complete the General Education program. Theatre/Musical Theatre majors cannot take THEA 210. Introduction to Theatre [C2VPA] to meet the visual and performing arts requirements. Dance majors cannot take DANC 215. The Dance Experience [C2VPA] to meet the visual and performing arts requirement. Courses from other academic units may not be counted both for the School of Theatre and Dance majors and for another major.

A minimum grade of "C" is required in all courses that apply to a major in the School of Theatre and Dance.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
University electives	0-14
Major requirements (listed below)	62
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures' placement test.

Major Requirements

All students pursuing a musical theatre major must complete the core requirements listed below.

Core Courses

STAD 171. Performance Production **Credits: 3.00**

STAD 250. The Collaborative Artist: Sophomore Studio **Credits: 3.00**

Choose one of the following: 2 Credit Hours

DANC 140. Elementary Modern Dance (0, 4) **Credits: 2.00**

DANC 142. Elementary Ballet (0, 4) **Credits: 2.00**

DANC 143. International Folk Dance (0, 4) **Credits: 2.00**

DANC 144. Ballroom Dance (0, 4) **Credits: 2.00**

DANC 147. Tap Dance (0, 4) **Credits: 2.00**

DANC 245. Dance Improvisation (0, 4) **Credits: 2.00**

Total: 8 Credit Hours

Program Requirements:

THEA 208. Theatre Practicum: Performance **Credits: 1.00**

or

THEA 308. Theatre Practicum: Performance **Credits: 1.00**

THEA 211. Performance Analysis **Credits: 3.00**

THEA 251. Acting I: Basic Acting **Credits: 3.00**

THEA 253. Musical Theatre Laboratory **Credits: 1.00** ¹

THEA 273. Design Aspects of Performance **Credits: 3.00**

THEA 315. World Theatre Histories, Texts and Performances I **Credits: 3.00**

THEA 316. World Theatre Histories, Texts and Performances II **Credits: 3.00**

THEA 351. Acting II: Intermediate Acting **Credits: 3.00**

THEA 353. Music Theatre Performance **Credits: 2.00**

THEA 357. Music Theatre History and Analysis **Credits: 3.00**

or

MUS 357. Music Theatre History and Analysis **Credits: 3.00**

THEA 454. Advanced Music Theatre Performance **Credits: 2.00**

THEA 455. Auditioning for Musical Theatre **Credits: 2.00**

DANC 146. Jazz Dance (0, 4) **Credits: 2.00**

DANC 246. Intermediate Jazz **Credits: 2.00**

DANC 346. Intermediate Jazz II/Musical Theatre Styles **Credits: 2.00**

MUAP 114. Group Voice for Musical Theatre Concentrators **Credits: 1.00** ¹

MUAP 214. Private Voice for Musical Theatre Concentrators **Credits: 1.00** ²

MUS 100. Keyboard Skills **Credits: 1.00**

MUS 101. Keyboard Skills II **Credits: 1.00**

MUS 140. Introduction to Music Theory and Aural Skills **Credits: 4.00**

Choose three of the following: 3 Credit Hours

(One credit each from scenery, lighting, costumes or management)

THEA 204. Theatre Practicum: Scenery **Credits: 1.00**

or

THEA 304. Theatre Practicum: Scenery **Credits: 1.00**

THEA 205. Theatre Practicum: Lights **Credits: 1.00**

or

THEA 305. Theatre Practicum: Lights **Credits: 1.00**

THEA 206. Theatre Practicum: Costumes **Credits: 1.00**

or

THEA 306. Theatre Practicum: Costumes **Credits: 1.00**

THEA 207. Theatre Practicum: Management **Credits: 1.00**

or

THEA 307. Theatre Practicum: Management **Credits: 1.00**

Choose one of the following: 3 Credit Hours

THEA 441. Senior Seminar in Theatre **Credits: 3.00**

or

THEA 442. Senior Seminar **Credits: 1.00 and**

THEA 499. Honors in Theatre **Credits: 1.00 – 3.00**

Major Requirements Total: 62 Credit Hours

Footnotes

¹ Two enrollments of one credit each.

² Four enrollments of one credit each.

Recommended Schedule for Majors

First Year

STAD 171. Performance Production **Credits: 3.00**

THEA 211. Performance Analysis **Credits: 3.00**

THEA 251. Acting I: Basic Acting **Credits: 3.00**

THEA 253. Musical Theatre Laboratory **Credits: 1.00** (Two enrollments of 1 credit each)

DANC 146. Jazz Dance (0, 4) **Credits: 2.00**

MUAP 114. Group Voice for Musical Theatre Concentrators **Credits: 1.00** (Two enrollments of 1 credit each)

Dance Core

Other technique courses to fit the student's schedule

Second Year

STAD 250. The Collaborative Artist: Sophomore Studio **Credits: 3.00**

THEA 273. Design Aspects of Performance **Credits: 3.00**

THEA 351. Acting II: Intermediate Acting **Credits: 3.00**

THEA 353. Music Theatre Performance **Credits: 2.00**

THEA 357. Music Theatre History and Analysis **Credits: 3.00**

DANC 246. Intermediate Jazz **Credits: 2.00**

MUS 100. Keyboard Skills **Credits: 1.00**

MUS 101. Keyboard Skills II **Credits: 1.00**

MUAP 214. Private Voice for Musical Theatre Concentrators **Credits: 1.00** (Two enrollments of 1 credit each)

Practicum

Other technique courses to fit the student's schedule

Third Year

THEA 315. World Theatre Histories, Texts and Performances I **Credits: 3.00**

THEA 316. World Theatre Histories, Texts and Performances II **Credits: 3.00**

THEA 455. Auditioning for Musical Theatre **Credits: 2.00**

MUS 140. Introduction to Music Theory and Aural Skills **Credits: 4.00**

MUAP 214. Private Voice for Musical Theatre Concentrators **Credits: 1.00** (Two enrollments of 1.00 credit each)

Practicum

Other technique courses to fit the student's schedule

Fourth Year

THEA 441. Senior Seminar in Theatre **Credits: 3.00**

or

THEA 442. Senior Seminar **Credits: 1.00** and

THEA 499. Honors in Theatre **Credits: 1.00 - 3.00**

THEA 455. Auditioning for Musical Theatre **Credits: 2.00**

Other technique courses to fit the student's schedule

Program Total: 120 Credit Hours

Dance Teaching Licensure

In addition to general education and theatre and dance requirements, students desiring PreK-12 teaching licensure in dance must complete 25 credits of additional course work in health professions, education, psychology, dance and 12 credits of student teaching. It is necessary to be admitted to the teacher education program prior to enrolling in professional education courses. For a complete description of admission and retention policies and procedures for teacher education, refer to the College of Education.

Course Requirements

Students seeking licensure are encouraged to consult regularly with the program coordinator of dance education. The undergraduate degree leading to licensure must include the following minimum requirements in dance: Course work in each area: ballet, folk¹, jazz and modern dance. Typically completed as part of the dance major, but may require additional course(s) to fulfill.

Course work in one area of concentration in ballet, folk, jazz or modern dance beyond entry level.

Course work in composition, improvisation, and dance arts production.

Course work in scientific foundations, including human anatomy, kinesiology, and injury prevention and care for dance arts.

Course work in cultural understanding, including cultural context and dance history.

The following is a list of the required courses leading to PreK-12 dance licensure and a suggested sequence of when each may be taken.

Required Courses

ATEP 205. Introduction to Athletic Training **Credits: 3.00** (spring, junior)

STAD 322. Equity, Inclusion and Access in Education and Performance **Credits: 3.00** (junior)

DANC 315. Injury Prevention and Conditioning **Credits: 3.00**

DANC 380. Dance Teaching Practicum **Credits: 3.00** (prior to student teaching)

Total: 12 Credit Hours

Required Education and Psychology Courses

EDUC 200. Foundations of Education in the United States **Credits: 3.00** (spring, sophomore) ²

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00** (may double count for General Education) ²

MSSE 425. Assessment in Middle and Secondary Education **Credits: 3.00** (spring, junior)

LED 420. Content Area Literacy, K-12 **Credits: 2.00** (fall, senior)

DANC 480. Student Teaching **Credits: 3.00 - 12.00** (Must be taken for 12.00 Credit Hours)

Total: 23 Credit Hours

Required Jazz Dance Courses (choose 2 credits of the following)

DANC 146. Jazz Dance (0, 4) **Credits: 2.00**

DANC 246. Intermediate Jazz **Credits: 2.00**

DANC 346. Intermediate Jazz II/Musical Theatre Styles **Credits: 2.00**

DANC 446. Advanced Jazz **Credits: 2.00**

Total: 2 Credit Hours

Total: 37 Credit Hours

Footnotes

¹ DANC 143 or DANC 303 (topic: folk dance) fulfill the folk dance requirement.

² Minimum grade of "C" required in EDUC 200, PSYC 160 and WRTC 103.

Teacher Licensure in Theatre

In addition to general education (including WRTC 103) and theatre major requirements, students desiring PK-12 licensure in theatre must complete additional course work in education, psychology and theatre. It is necessary to be admitted to the teacher education program prior to enrolling in professional education courses. For a complete description of admission and retention policies and procedures for teacher education, refer to the College of Education.

Students seeking licensure are encouraged to consult regularly with the theatre education program adviser. The undergraduate degree leading to licensure must include the following minimum requirements in theatre:

Theatre education and teaching artistry concentration requirements (15 credits)
All theatre major core requirements (8 credits)
All theatre major non-concentration requirements (28 credits)
Directing (i.e. THEA 355) must be taken to fulfill the major's "performance requirement" (3 credits)

Theatre Education and Teaching Artistry Concentration

Students who complete the theatre education and teaching artistry concentration are able to apply for a PreK-12 teaching licensure in theatre. This concentration requires 15 THEA credits.

Please refer to the Theatre Education and Teaching Artistry Concentration page for requirements.

Required Education and Psychology Courses

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**¹
EDUC 200. Foundations of Education in the United States **Credits: 3.00**¹
LED 420. Content Area Literacy, K-12 **Credits: 2.00**
MSSE 425. Assessment in Middle and Secondary Education **Credits: 3.00**
THEA 325. Theatre Teaching Practicum **Credits: 3.00**²
THEA 480. Student Teaching **Credits: 3.00 - 12.00** (THEA 480 must be taken for a total of **Credits: 12.00**)²

Total: 26 Credit Hours

Footnotes

¹ Minimum grade of "C" required in EDUC 200, PSYC 160 and WRTC 103, and are prerequisites for teacher education.

² Students must be accepted to the teacher education program through the College of Education to enroll in THEA 325 and THEA 480.

Dance Minor

Suzanne Miller-Corso, **Dance Minor Adviser**
Email: mille2sm@jmu.edu
Phone: (540) 568-3924

Minor Requirements

The School of Theatre and Dance offers a minor with options in theatre or dance. No audition or portfolio review is required for the theatre minor or dance minor. A minimum grade of "C" must be achieved in all School of Theatre and Dance courses that apply to a minor in the School of Theatre and Dance.

Courses

DANC 245. Dance Improvisation (0, 4) **Credits: 2.00**
DANC 248. History of Dance: Renaissance Through the 20th Century **Credits: 3.00**
Electives from contemporary dance techniques and/or folk and ballroom techniques with approval of minor adviser **10.00 Credit Hours**
Electives selected from dance-designated courses and/or dance related courses at the 300 or 400 level with approval of minor adviser. **6.00 Credit Hours**

Total: 21 Credit Hours

Theatre Minor

Zachary Dorsey, **Adviser**
Email: dorseyza@jmu.edu
Phone: (540) 568-4551

Minor Requirements

The School of Theatre and Dance offers a minor with options in theatre or dance. No audition or portfolio review is required for the theatre minor or dance minor. A minimum grade of "C" must be achieved in all School of Theatre and Dance courses that apply to a minor in the School of Theatre and Dance.

Courses

Choose one of the following: 3 Credit Hours

STAD 171. Performance Production **Credits: 3.00**
THEA 273. Design Aspects of Performance **Credits: 3.00**

Choose one of the following: 3 Credit Hours

THEA 210. Introduction to Theatre [C2VPA] **Credits: 3.00**
THEA 211. Performance Analysis **Credits: 3.00**

Electives: 15 Credit Hours

Electives selected from the theatre-designated courses with the approval of the minor adviser

Total: 21 Credit Hours

Theatre, B.A.

Program Description

The School of Theatre and Dance offers a B.A. in theatre. A theatre major must fulfill degree and major requirements.

Credit by Examination

A student may earn credit for a course in the School of Theatre and Dance by passing an examination. The school administers credit by examination tests during only the first two weeks of a fall or spring semester. The tests will not be offered during summer sessions. A student can take a credit by examination test only once during a semester.

A student must request permission for credit by examination by the end of the semester that precedes the semester in which they want to take the examination. Theatre majors who want to meet a major requirement through examination must take the examination before their final year of study. The school does not offer credit by examination for performance or design courses such as acting, directing, scene design, lighting design, costume design, makeup, stage management, dance technique, composition and ensembles.

Special Admission and Retention Requirements

Admission to the dance, theatre and musical theatre majors are competitive and an audition/interview is required. Please see the School of Theatre and Dance website for more information: <https://www.jmu.edu/theatredance/apply/index.shtml>.

All School of Theatre and Dance majors must complete the requirements for a Bachelor of Arts degree and must complete the General Education program. Theatre/Musical Theatre majors cannot take THEA 210. Introduction to Theatre [C2VPA] to meet the visual and performing arts requirements. Dance majors cannot take DANC 215. The Dance Experience [C2VPA] to meet the visual and performing arts requirement. Courses from other academic units may not be counted both for the School of Theatre and Dance majors and for another major.

A minimum grade of "C" is required in all courses that apply to a major in the School of Theatre and Dance.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
University electives	8-28
Major requirements	39
Major electives or concentration ³	9-15
Total	120

Footnotes

¹ Some General Education courses may be fulfilled by requirements within the major.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232) or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures' placement test.

³ Includes nine credit hours of theatre electives or 9-15 credit hours of concentration-specific courses.

Major Requirements

All students pursuing a B.A. degree in theatre must complete the core requirements.

Core Courses

STAD 171. Performance Production **Credits: 3.00**

STAD 250. The Collaborative Artist: Sophomore Studio **Credits: 3.00**

Choose one of the following: 2 Credit Hours

DANC 140. Elementary Modern Dance (0, 4) **Credits: 2.00**

DANC 142. Elementary Ballet (0, 4) **Credits: 2.00**

DANC 143. International Folk Dance (0, 4) **Credits: 2.00**

DANC 144. Ballroom Dance (0, 4) **Credits: 2.00**

DANC 146. Jazz Dance (0, 4) **Credits: 2.00**

DANC 147. Tap Dance (0, 4) **Credits: 2.00**

DANC 245. Dance Improvisation (0, 4) **Credits: 2.00**

Core Requirements Total: 8 Credit Hours

Program Requirements

THEA 211. Performance Analysis **Credits: 3.00**

THEA 251. Acting I: Basic Acting **Credits: 3.00**

THEA 273. Design Aspects of Performance **Credits: 3.00**

THEA 315. World Theatre Histories, Texts and Performances I **Credits: 3.00**

THEA 316. World Theatre Histories, Texts and Performances II **Credits: 3.00**

THEA 317. World Theatre Histories, Texts and Performances III **Credits: 3.00**

Choose four of the following: 4 Credit Hours

(One credit each from scenery, lighting, costumes, management or performance)

THEA 204. Theatre Practicum: Scenery **Credits: 1.00**

or

THEA 304. Theatre Practicum: Scenery **Credits: 1.00**

THEA 205. Theatre Practicum: Lights **Credits: 1.00**

or

THEA 305. Theatre Practicum: Lights **Credits: 1.00**

THEA 206. Theatre Practicum: Costumes **Credits: 1.00**

or

THEA 306. Theatre Practicum: Costumes **Credits: 1.00**

THEA 207. Theatre Practicum: Management **Credits: 1.00**

or

THEA 307. Theatre Practicum: Management **Credits: 1.00**

THEA 208. Theatre Practicum: Performance **Credits: 1.00**

or

THEA 308. Theatre Practicum: Performance **Credits: 1.00**

Choose one of the following: 3 Credit Hours

THEA 441. Senior Seminar in Theatre **Credits: 3.00**

THEA 442. Senior Seminar **Credits: 1.00** and

THEA 499. Honors in Theatre **Credits: 1.00 - 3.00**

Performance Requirements: 3 Credit Hours

(Choose one)

THEA 351. Acting II: Intermediate Acting **Credits: 3.00**

THEA 355. Directing for the Theatre **Credits: 3.00** ¹

Design/Technology Requirements: 3 Credit Hours

(Choose one)

STAD 471. Stage Management **Credits: 3.00**

THEA 271. Technical Theatre **Credits: 3.00**

THEA 331. Technical Costuming **Credits: 3.00**

THEA 332. Costume and Fashion History **Credits: 3.00**

THEA 333. Costume Design **Credits: 3.00**

THEA 374. Stage Lighting **Credits: 3.00**

THEA 375. Sound Design **Credits: 3.00**

THEA 376. Scene Design **Credits: 3.00**

Major Requirements Total: 39 Credit Hours

Footnote

¹ Theatre Education students must take THEA 355 to fulfill VA licensure requirements.

Concentrations

Theatre majors may fulfill the requirements for one or more concentrations or complete nine THEA credits not already applied to the major.

Students may interview and/or audition into any concentration at the same time as their interview and/or audition into the Theatre Major. Alternatively, incoming students may still be admitted as unconcentrated Theatre Majors and audition/interview for a Theatre Education concentration later in their first year or in a subsequent year. Concentrations are not required. Students may be admitted into multiple concentrations. Students may also be admitted into the Theatre Major, but not admitted into a specific concentration.

Performance concentrators will complete ten credits, including serving in at least one Lab or Studio student production as an assistant designer, designer, assistant technical director, electrician, head carpenter, assistant stage manager, stage manager or dramaturg to expand student understanding of, and proficiency in, multiple areas of theatre practice.

Concentrations include:

Design/Technology Concentration

Choose two courses not already applied to the major:

THEA 333. Costume Design **Credits: 3.00**

THEA 374. Stage Lighting **Credits: 3.00**

THEA 375. Sound Design **Credits: 3.00**

THEA 376. Scene Design **Credits: 3.00**

Choose one course not already applied to the major:

STAD 260. Season Planning and Management **Credits: 1.00 - 2.00**

THEA 271. Technical Theatre **Credits: 3.00**

THEA 331. Technical Costuming **Credits: 3.00**

THEA 332. Costume and Fashion History **Credits: 3.00**

THEA 336. History, Theory and Practice of Stage Makeup **Credits: 3.00**

THEA 473. Advanced Design and Rendering **Credits: 3.00**

THEA 371. Advanced Technical Theatre **Credits: 3.00**

STAD 471. Stage Management **Credits: 3.00**

THEA 390. Directed Projects **Credits: 1.00 - 3.00**¹

or

THEA 490. Special Studies in Theatre **Credits: 1.00 - 3.00**¹

Footnote

¹ No more than four hours of practicums (THEA 390, THEA 490, THEA 499) may be applied to the theatre major, and no more than 10 hours of special studies (including practicums) may be applied to the theatre major.

Design/Technology Concentration Total: 9 Credit Hours

Performance Concentration

THEA 390. Directed Projects **Credits: 1.00 - 3.00** (THEA 390 must be taken for **Credit: 1.00**)

THEA 452. Acting III: Contemporary Scene Study **Credits: 3.00**

THEA 453. Acting IV: Approach to Heightened Language **Credits: 3.00**

THEA 460. Auditioning and Professional Issues **Credits: 3.00**

Performance Concentration Total: 10 Credit Hours

Theatre Education and Teaching Artistry Concentration

This concentration requires 15 THEA/STAD credits. Students who complete the theatre education and teaching artistry concentration are able to apply for the PreK-12 teaching licensure in theatre program; however, they will need to complete 26 additional credits within the Teacher Licensure in Theatre program to be eligible for licensure.

Refer to the Teacher Licensure in Theatre page for licensure requirements.

STAD 322. Equity, Inclusion and Access in Education and Performance **Credits: 3.00**

THEA 319. Theatre Teaching Methods **Credits: 3.00**

THEA 323. Youth Theatre **Credits: 3.00**

THEA 324. Theatre for Young Audiences **Credits: 3.00**

THEA 325. Theatre Teaching Practicum **Credits: 3.00**

Theatre Education and Teaching Artistry Concentration Total: 15 Credit Hours

Theatre Studies Concentration

The Theatre Studies Concentration requires nine credits not already applied to the major.

Choose two courses not already applied to the major, from the following list. Choose any three additional DANC or THEA credits not already applied to the major, or any three additional credits of dramatic literature, theatre, performance studies, or critical theory related courses in other programs with your adviser's permission.

STAD 322. Equity, Inclusion and Access in Education and Performance **Credits: 3.00**

THEA 347. Playwriting **Credits: 3.00**

THEA 365. Dramaturgy **Credits: 3.00**

THEA 447. Advanced Playwriting **Credits: 3.00**
THEA 488. Alternative Performance **Credits: 3.00**

Theatre Studies Concentration Total: 9 Credit Hours

Recommended Schedule for Majors

First Year

STAD 171. Performance Production **Credits: 3.00**
THEA 211. Performance Analysis **Credits: 3.00**
THEA 251. Acting I: Basic Acting **Credits: 3.00**
THEA 204 - THEA 308 (*Students will take 1 credit of practicum this year*) **Credit: 1.00**
Dance Requirement **Credits: 2.00**
General Education (beginning with Cluster 1) and B.A. language requirements
Credits: 18.00

First Year Total: 30 Credit Hours

Second Year

STAD 250. The Collaborative Artist: Sophomore Studio **Credits: 3.00**
THEA 273. Design Aspects of Performance **Credits: 3.00**
THEA 315. World Theatre Histories, Texts and Performances I **Credits: 3.00**
THEA 316. World Theatre Histories, Texts and Performances II **Credits: 3.00**

THEA 351. Acting II: Intermediate Acting **Credits: 3.00**
or
THEA 204 - THEA 308 (*Students will take 2 credits of practicum this year*) **Credits: 2.00**

THEA 355. Directing for the Theatre **Credits: 3.00**
Choose one Design / Technology Course **Credits: 3.00**
General Education and/or B.A. Philosophy/Language Requirement
Credits: 12.00

Second Year Total: 32 Credit Hours

Third Year

THEA 317. World Theatre Histories, Texts and Performances III **Credits: 3.00**
Theatre Electives **Credits: 6.00**
General Education, Concentration or University Electives **Credits: 21.00**

Third Year Total: 30 Credit Hours

Fourth Year

THEA 441. Senior Seminar in Theatre **Credits: 3.00**
or
THEA 442. Senior Seminar **Credits: 1.00 and**
THEA 204 - THEA 308 (*Students will take 1 credit of practicum this year*)
Credit: 1.00

THEA 499. Honors in Theatre **Credits: 1.00 - 3.00**
Theatre Major Requirements **Credits: 9.00**
Electives or General Education **Credits: 15.00**

Fourth Year Total: 28 Credit Hours

Program Total: 120 Credit Hours

School of Writing, Rhetoric and Technical Communication

Michael Smith, **Director**
Phone: (540) 568-6004
Email: smithmx@jmu.edu
Location: Harrison Hall, Room 2252
Website: <http://www.jmu.edu/wrtc/index.shtml>

Professors

J. Almjeld, M. Klein, S. Lunsford, S. McCarthy, M. Smith, T. Zimmerman

Associate Professors

S. Aley, A. Crow, L. De Hertogh, S. Ghiaciuc, E. Gumnior, A. Parrish, E. Pass,
L. Schubert, J. Zimmerman

Assistant Professors

H. Comfort, J. Wourman

Senior Lecturers

C. Martin, K. McDonnell

Lecturers

D. DeRise, M. Hickman, K. Jefferson, A. Johnson, J. Varner

Mission Statement

We guide and inspire writing professionals.

Goals

Changing how the world values writers.

Career Opportunities

In the WRTC major, students learn the kinds of research, analytical and reasoning skills that will allow them to become successful professionals in a wide range of fields. WRTC graduates can expect career opportunities in writing, editing or production positions with a variety of business, educational or industry employers, including the computer hardware and software industry, law firms, journalism, health care providers, pharmaceutical manufacturers, education, engineering companies, publishing houses, environmental

organizations, not-for-profit or political organizations, and technical translation groups of multinational corporations. WRTC graduates also choose to further their studies in MA, MS, MBA, MFA, PhD and law school programs.

Professional Activities and Organizations

Internships

The WRTC internship is a requirement for all B.A. and B.S. students. It allows students to utilize preparation from their WRTC coursework to design, write, edit and produce professional documents for internship providers in academia, business, industry and government. Information about internships may be obtained through the **WRTC website**.

RhetTech Journal

RhetTech is WRTC's student-run, online journal. It publishes high-quality compositions in a variety of genres from students working in the disciplines of writing, rhetoric and technical communication across the country. *RhetTech* is created and managed by students enrolled in WRTC 328. These practicum students develop evaluation criteria, read and discuss each submission, and work individually with winning writers to prepare their work for publication.

JMURJ

The *James Madison Undergraduate Research Journal* is a peer-reviewed academic journal dedicated to promoting, publishing and sharing the text- and media-based research and scholarship created by undergraduate students in all JMU disciplines. *JMURJ* editorial board members collaborate within and across teams and coordinate the efforts of students, faculty and administrators in a university-wide effort to advance JMU undergraduate scholarship, research and intellectual work.

Pre-Law

Pre-law at JMU is not a major, but a number of WRTC students elect to pursue law school after graduation. WRTC Professor and Associate Dean Traci Zimmerman serves the College of Arts and Letters as a pre-law adviser and can assist students in selecting courses that will best provide the intellectual challenge and skills necessary for success in law school.

Service to the University

Honors College

WRTC faculty regularly offer honors seminars and mentor students as they complete their honor's thesis projects.

Madison Writing Awards

The Madison Writing Awards (MWA) is a university-wide competition that celebrates writing across the curriculum in all undergraduate academic programs, regardless of medium and genre, from traditional papers to multimodal productions. These awards reflect the commitment of James Madison University, the College of Arts and Letters, and the School of Writing, Rhetoric and Technical Communication to prepare students for educated and enlightened global citizenship through the outlets of writing and rhetoric. The MWA biennial awards ceremony features a showcase of winning pieces as well as the presentation of cash prizes.

Writing, Rhetoric and Technical Communication Minor

The minimum requirement for a minor in WRTC is 18 credit hours.

Minor Requirements

WRTC 200. Introduction to Studies in Writing, Rhetoric and Technical Communication

Credits: 3.00

WRTC 201. Theory and Methods in Writing, Rhetoric and Technical Communication

Credits: 3.00

WRTC 300. Professional Editing **Credits: 3.00**

WRTC 301. Language, Law and Ethics **Credits: 3.00**

Choose any two WRTC electives **6 Credit Hours**

Total: 18 Credit Hours

Writing, Rhetoric and Technical Communication, B.A.

Program Description

The WRTC major emphasizes scholarly, humanistic and social scientific perspectives on the function and application of communication technologies, with instruction in areas such as:

- literacy studies
- rhetorical traditions
- writing pedagogy
- editing
- website theory and design
- publications management
- knowledge and information management
- writing for professional communities such as government, medical, scientific and academic

In addition to offering students the rhetorical tools with which to excel as professional communicators, the B.A. and B.S. programs also prepare graduates for academic studies in writing, rhetoric and technical communication at the master's level as well as for professional programs such as law school.

The B.A. and B.S. programs in WRTC unite three disciplines into a flexible, yet historically and theoretically grounded degree program. The WRTC degree teaches students to think in ways that cross disciplinary lines and to demonstrate accomplishment in multiple genres of writing, rhetoric and technical communication.

Students work with their WRTC advisers to design a program that fits their unique educational needs and career aspirations.

Course requirements differ between the B.A. and B.S. programs, and students should maintain regular contact with their WRTC adviser to ensure timely graduation. Requirements and eligible courses for the B.A. are outlined below.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Foreign language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
Major requirements	39
University electives	23-37
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some of these credits may be fulfilled by courses within a student's major or minor.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level (typically 232) of the student's chosen language or by placing out of that language through the Department of Foreign Language, Literature and Cultures' placement test.

Major Requirements

	Credit Hours
Core requirements	21
WRTC electives	18
Major Requirements Total	39

Core Requirements: 21 Credit Hours

All students must complete 21 hours of core requirements.

WRTC 200. Introduction to Studies in Writing, Rhetoric and Technical Communication **Credits: 3.00**
WRTC 301. Language, Law and Ethics **Credits: 3.00**
WRTC 316. Research Methodologies in WRTC **Credits: 3.00**
WRTC 300. Professional Editing **Credits: 3.00**
WRTC 350. Foundations of Technical Communication **Credits: 3.00**
WRTC 495. Internship in Writing, Rhetoric and Technical Communication **Credits: 3.00**
WRTC 496. Capstone in Writing, Rhetoric and Technical Communication **Credits: 3.00**

Prerequisites

Prerequisites for most courses above WRTC 200 require completion of WRTC 200. Students may enroll in some courses for which they have not taken the prerequisite courses with permission of the instructor.

Writing, Rhetoric and Technical Communication Major Electives

The WRTC major is designed to provide students the flexibility to choose the electives that fit their own interests and future plans. WRTC advisers can give students information on tracks they might wish to follow when making choices of which elective courses to take, yet no specific grouping is required to complete the major. In addition to choosing any 12 credit hours in WRTC electives, students take one community-based learning (CBL) course (3 credits) and one culturally-engaged requirement course (3 credits).

Writing, Rhetoric and Technical Communication Elective Requirements

WRTC Electives: 12 Credit Hours

Choose four of the following courses:

WRTC 310. Semiotics **Credits: 3.00**
WRTC 312. Studies in Literacy **Credits: 3.00**
WRTC 314. Writing in the Public Sphere **Credits: 3.00**
WRTC 318. Intercultural Professional Communication **Credits: 3.00**
WRTC 326. Environmental Communication and Advocacy **Credits: 3.00**
WRTC 328. Practicum **Credits: 1.00 – 3.00**
WRTC 330. Rhetorical Analysis and Criticism **Credits: 3.00**
WRTC 332. Creative Approaches to Digital Storytelling **Credits: 3.00**
WRTC 334. Introduction to Popular Writing **Credits: 3.00**
WRTC 336. Writing Consultation **Credits: 3.00**
WRTC 338. Sound Writing **Credits: 3.00**
WRTC 340. Writing as Leading **Credits: 3.00**
WRTC 342. Writing Place **Credits: 3.00**
WRTC 352. Online Design I **Credits: 3.00**
WRTC 354. Document Design **Credits: 3.00**
WRTC 356. Web Theory and Design **Credits: 3.00**
WRTC 358. Writing About Science and Technology **Credits: 3.00**
WRTC 412. Content Strategy **Credits: 3.00**
WRTC 416. Rhetoric of Environmental Science and Technology **Credits: 3.00**
WRTC 426. Special Topics in Writing, Rhetoric and Technical Communication **Credits: 3.00**
WRTC 430. Contemporary Rhetorical Theory and Practice **Credits: 3.00**
WRTC 432. Rhetoric of the Personal Narrative **Credits: 3.00**
WRTC 434. Advanced Popular Writing **Credits: 3.00**
WRTC 436. Teaching Writing **Credits: 3.00**
WRTC 450. Digital Rhetoric **Credits: 3.00**
WRTC 452. Online Design II **Credits: 3.00**
WRTC 454. Publication Management **Credits: 3.00**
WRTC 456. Usability Testing **Credits: 3.00**
WRTC 458. Scientific and Medical Communication **Credits: 3.00**
WRTC 460. Legal Writing **Credits: 3.00**
WRTC 462. Government Writing **Credits: 3.00**
SCOM 465. Rhetoric of Environmental Science and Technology **Credits: 3.00**

Culturally Engaged Requirement: 3 Credit Hours

Choose one of the following courses:

WRTC 318. Intercultural Professional Communication **Credits: 3.00**
WRTC 420. Feminist Rhetorics **Credits: 3.00**
or
SCOM 420. Feminist Rhetorics **Credits: 3.00**
or
WGSS 420. Feminist Rhetorics **Credits: 3.00**

Community-Based Learning Electives: 3 Credit Hours

Choose one of the following courses:

WRTC 480. Writing for Business and Industry **Credits: 3.00**
WRTC 484. Writing for Nonprofits **Credits: 3.00**
WRTC 486. Writing in the Community **Credits: 3.00**
WRTC 488. Writing in the Health Sciences **Credits: 3.00**

WRTC Electives Total: 18 Credit Hours

Recommended Schedule for Majors

Students are encouraged to begin their WRTC course work as soon as possible in their degree plans. The following sample program of study illustrates how a WRTC major might earn a B.A. degree.

First Year - First Semester

Foreign language course ¹ *Credits: 3.00-4.00*
General Education Cluster One *Credits: 9.00*
The Natural World (formerly Cluster Three: The Natural World) *Credits: 3.00*

First Year - First Semester Total: 15-16 Credit Hours

Footnotes

¹ Completion of an intermediate level foreign language is required for the B.A. degree (usually six hours if begun at the intermediate level) unless the language requirement is satisfied by an exemption test. In that case, university electives may be substituted for additional hours indicated as foreign language courses.

First Year - Second Semester

WRTC 200. Introduction to Studies in Writing, Rhetoric and Technical Communication **Credits: 3.00**
Foreign language course *Credits: 3.00-4.00*
General Education Cluster Three course *Credits: 3.00*
General Education courses *Credits: 6.00*

First Year - Second Semester Total: 15-16 Credit Hours

Second Year - First Semester

WRTC 316. Research Methodologies in WRTC **Credits: 3.00**
Foreign language course *Credits: 0.00-3.00*
B.A. Degree philosophy course *Credits: 3.00*
General Education Cluster Three course *Credits: 4.00*
General Education courses *Credits: 0.00-9.00*

Second Year - First Semester Total: 16 Credit Hours

Second Year - Second Semester

WRTC 300. Professional Editing **Credits: 3.00**
WRTC Elective: *Credits: 3.00*
WRTC 350. Foundations of Technical Communication **Credits: 3.00**
Foreign language course *Credits: 0.00-3.00*
General Education course *Credits: 3.00*
University electives *Credits: 3.00*

Second Year - Second Semester Total: 15-18 Credit Hours

Third Year - First Semester

WRTC electives *Credits: 6.00*
General Education courses *Credits: 6.00*
University elective *Credits: 3.00*

Third Year - First Semester Total: 15 Credit Hours

Third Year - Second Semester

WRTC elective *Credits: 6.00*
General Education courses *Credits: 3.00-6.00*
University electives *Credits: 6.00*

Third Year - Second Semester Total: 15-18 Credit Hours

Fourth Year - First Semester

WRTC electives *Credits: 3.00-6.00*
University electives *Credits: 6.00-9.00*

Fourth Year - First Semester Total: 15-18 Credit Hours

Fourth Year - Second Semester

WRTC 495. Internship in Writing, Rhetoric and Technical Communication **Credits: 3.00**
WRTC 496. Capstone in Writing, Rhetoric and Technical Communication **Credits: 3.00**
WRTC elective *Credits: 0.00-3.00*
University electives *Credits: 6.00-9.00*

Fourth Year - Second Semester Total: 15-16 Credit Hours

Program Total: 120 Credit Hours

*Writing, Rhetoric and Technical
Communication, B.S.*

Program Description

The WRTC major emphasizes scholarly, humanistic and social scientific perspectives on the function and application of communication technologies, with instruction in areas such as:

- literacy studies
- rhetorical traditions
- writing pedagogy
- editing
- website theory and design
- publications management
- knowledge and information management
- writing for professional communities such as government, medical, scientific and academic

In addition to offering students the rhetorical tools with which to excel as professional communicators, the B.A. and B.S. programs also prepare graduates for academic studies in writing, rhetoric and technical communication at the master's level as well as for professional programs such as law school.

The B.A. and B.S. programs in WRTC unite three disciplines into a flexible, yet historically and theoretically grounded degree program. The WRTC degree teaches students to think in ways that cross disciplinary lines and to demonstrate accomplishment in multiple genres of writing, rhetoric and technical communication.

Students work with their WRTC advisers to design a program that fits their unique educational needs and career aspirations.

Course requirements differ between the B.A. and B.S. programs, and students should maintain regular contact with their WRTC adviser to ensure timely graduation. Requirements and eligible courses for the B.S. are outlined below.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ¹	41
Quantitative requirement ²	3
Scientific literacy requirement ²	3-4
Major requirements	39
University electives	33-34
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some of these credits may be fulfilled by courses within a student's major or minor.

² In addition to course work taken to fulfill General Education requirements.

Major Requirements

	Credit Hours
Core requirements	21
WRTC electives	18
Major Requirements Total	39

Core Requirements: 21 Credit Hours

All students must complete 21 hours of core requirements.

- WRTC 200. Introduction to Studies in Writing, Rhetoric and Technical Communication **Credits: 3.00**
WRTC 301. Language, Law and Ethics **Credits: 3.00**
WRTC 316. Research Methodologies in WRTC **Credits: 3.00**
WRTC 300. Professional Editing **Credits: 3.00**
WRTC 350. Foundations of Technical Communication **Credits: 3.00**
WRTC 495. Internship in Writing, Rhetoric and Technical Communication **Credits: 3.00**
WRTC 496. Capstone in Writing, Rhetoric and Technical Communication **Credits: 3.00**

Prerequisites

Prerequisites for most courses above WRTC 200 require completion of WRTC 200. Students may enroll in some courses for which they have not taken the prerequisite courses with permission of the instructor.

Writing, Rhetoric and Technical Communication Major Electives

The WRTC major is designed to provide students the flexibility to choose the electives that fit their own interests and future plans. WRTC advisers can give students information on tracks they might wish to follow when making choices of which elective courses to take, yet no specific grouping is required to complete the major. In addition to choosing any 12 credit hours in WRTC electives, students take one community-based learning (CBL) course (3 credits) and one culturally-engaged requirement course (3 credits).

Writing, Rhetoric and Technical Communication Elective Requirements

WRTC Electives: 12 Credit Hours

- Choose four of the following courses:
WRTC 310. Semiotics **Credits: 3.00**
WRTC 312. Studies in Literacy **Credits: 3.00**
WRTC 314. Writing in the Public Sphere **Credits: 3.00**
WRTC 318. Intercultural Professional Communication **Credits: 3.00**
WRTC 326. Environmental Communication and Advocacy **Credits: 3.00**
WRTC 328. Practicum **Credits: 1.00 - 3.00**

WRTC 330. Rhetorical Analysis and Criticism **Credits: 3.00**
 WRTC 332. Creative Approaches to Digital Storytelling **Credits: 3.00**
 WRTC 334. Introduction to Popular Writing **Credits: 3.00**
 WRTC 336. Writing Consultation **Credits: 3.00**
 WRTC 338. Sound Writing **Credits: 3.00**
 WRTC 340. Writing as Leading **Credits: 3.00**
 WRTC 342. Writing Place **Credits: 3.00**
 WRTC 352. Online Design I **Credits: 3.00**
 WRTC 354. Document Design **Credits: 3.00**
 WRTC 356. Web Theory and Design **Credits: 3.00**
 WRTC 358. Writing About Science and Technology **Credits: 3.00**
 WRTC 412. Content Strategy **Credits: 3.00**
 WRTC 416. Rhetoric of Environmental Science and Technology **Credits: 3.00**
 WRTC 426. Special Topics in Writing, Rhetoric and Technical Communication **Credits: 3.00**
 WRTC 430. Contemporary Rhetorical Theory and Practice **Credits: 3.00**
 WRTC 432. Rhetoric of the Personal Narrative **Credits: 3.00**
 WRTC 434. Advanced Popular Writing **Credits: 3.00**
 WRTC 436. Teaching Writing **Credits: 3.00**
 WRTC 450. Digital Rhetoric **Credits: 3.00**
 WRTC 452. Online Design II **Credits: 3.00**
 WRTC 454. Publication Management **Credits: 3.00**
 WRTC 456. Usability Testing **Credits: 3.00**
 WRTC 458. Scientific and Medical Communication **Credits: 3.00**
 WRTC 460. Legal Writing **Credits: 3.00**
 WRTC 462. Government Writing **Credits: 3.00**
 SCOM 465. Rhetoric of Environmental Science and Technology **Credits: 3.00**

Culturally Engaged Requirement: 3 Credit Hours

Choose one of the following courses:

WRTC 318. Intercultural Professional Communication **Credits: 3.00**
 WRTC 420. Feminist Rhetorics **Credits: 3.00**
 or
 SCOM 420. Feminist Rhetorics **Credits: 3.00**
 or
 WGSS 420. Feminist Rhetorics **Credits: 3.00**

Community-Based Learning Electives: 3 Credit Hours

Choose one of the following courses:

WRTC 480. Writing for Business and Industry **Credits: 3.00**
 WRTC 484. Writing for Nonprofits **Credits: 3.00**
 WRTC 486. Writing in the Community **Credits: 3.00**
 WRTC 488. Writing in the Health Sciences **Credits: 3.00**

WRTC Electives Total: 18 Credit Hours

Recommended Schedule for Majors

Students are encouraged to begin their WRTC course work as soon as possible in their degree plans. The following sample program of study illustrates how a WRTC major might earn a B.S. degree.

First Year - First Semester

General Education Cluster One courses **Credits: 9.00**
 General Education Cluster Three courses **Credits: 3.00-6.00**
 General Education courses **Credits: 3.00**

First Year - First Semester Total: 15-18 Credit Hours

First Year - Second Semester

BS Requirements, 3 credit hours
 WRTC 200. Introduction to Studies in Writing, Rhetoric and Technical Communication **Credits: 3.00**
 General Education Cluster Three courses **Credits: 3.00-4.00**
 General Education courses **Credits: 6.00**

First Year - Second Semester Total: 15-16 Credit Hours

Second Year - First Semester

WRTC 300. Professional Editing **Credits: 3.00**
 WRTC 316. Research Methodologies in WRTC **Credits: 3.00**
 General Education Cluster Three course **Credits: 0.00-4.00**
 General Education courses **Credits: 6.00-9.00**

Second Year - First Semester Total: 15-16 Credit Hours

Second Year - Second Semester

WRTC Electives **Credits: 3.00**
 WRTC 350. Foundations of Technical Communication **Credits: 3.00**
 B.S. Quantitative requirement **Credits: 3.00**
 General Education courses **Credits: 9.00**

Second Year - Second Semester Total: 15-18 Credit Hours

Third Year - First Semester

WRTC electives **Credits: 6.00**
 B.S. Scientific Literacy requirement ¹ **Credits: 3.00**
 University electives **Credits: 6.00-9.00**

Third Year - First Semester Total: 15-18 Credit Hours

¹ Completion of the B.S. degree requires a student to complete either a natural science or a social science course in addition to those required for the General Education program.

Third Year - Second Semester

WRTC elective **Credits: 6.00**
 University electives **Credits: 9.00**

Third Year - Second Semester Total: 15 Credit Hours

Fourth Year - First Semester

WRTC elective **Credits:** 3.00-6.00
University electives **Credits:** 6.00-9.00

Fourth Year - First Semester Total: 12-15 Credit Hours

Fourth Year - Second Semester

WRTC 495. Internship in Writing, Rhetoric and Technical Communication **Credits:** 3.00
WRTC 496. Capstone in Writing, Rhetoric and Technical Communication **Credits:** 3.00
WRTC Electives **Credits:** 3.00
University Electives: **Credits:** 6.00-9.00

Fourth Year - Second Semester Total: 13-16 Hours

Program Total: 120 Credit Hours

Adult Degree Program

Phone: (540) 568- 4253
Email: adp@jmu.edu
Location: Ice House, 127 W. Bruce Street, Room 332
Website: <http://www.jmu.edu/adultdegree>

Mission

The Adult Degree Program/Bachelor of Individualized Study delivers a flexible, dynamic and rigorous degree completion curriculum to meet the individual education and career goals of our students. ADP/BIS's non-residential program offers a framework for students with significant transfer credit and/or prior learning experience to design their own academic plan.

Admission

To be eligible for the ADP, applicants must be at least 22 years of age, have at least 30 transferable college credits and have a minimum cumulative GPA of 2.0 or higher for all prior coursework.

With very limited exceptions, students in the Individualized Study major (the ADP's academic major) cannot transfer to another major at JMU.

Degrees Offered

Students in the ADP have the opportunity to earn a Bachelor of Individualized Study (B.I.S.), a Bachelor of Arts (B.A.) in Individualized Study or a Bachelor of Science (B.S.) in Individualized Study. The university degree requirements differ by degree type.

Individualized Study, B.A.

Program Description

Phone: (540) 568- 4253
Email: adp@jmu.edu
Location: Ice House, 127 W. Bruce Street, Room 332
Website: <http://www.jmu.edu/adultdegree>

Mission

The adult degree program (ADP) addresses the needs of adult learners through an innovative, personalized program plan of study and provides students with the opportunity to develop an undergraduate degree that meets their individual educational and professional goals.

Admission

To be eligible for the ADP, applicants must be at least 22 years of age, have at least 30 transferable college credits and have a minimum cumulative GPA of 2.0 for all prior coursework.

With very limited exceptions, students in the individualized study major (the ADP's academic major) cannot transfer to another major at JMU.

Degrees Offered

Students in the ADP have the opportunity to earn a Bachelor of Individualized Study (B.I.S.), a Bachelor of Arts (B.A.) in individualized study or a Bachelor of Science (B.S.) in individualized study. The university degree requirements differ by degree type.

Degree and Major Requirements

The Bachelor of Arts (B.A.) in individualized study requires 41 general education credits, an additional philosophy course (3.00 credit hours) and foreign language at the intermediate level (6.00 credit hours).

Degree Requirements	Credit Hours
General Education courses ¹	41
Foreign language courses (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses) ³	3
Major concentration courses and electives ⁴	62-76
Total	120

Footnotes

¹ The General Education: The Human Community program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.
² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232), or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures placement test.
³ Any PHIL course except PHIL 120 or PHIL 150. Consult the list of courses satisfying Bachelor of Arts degree requirements on the Registrar's website.
⁴ Includes education courses leading to licensure in teacher education.

Major Requirements

Students must complete:

- IS 200. Individualized Study Major Program Development
- A minimum of 120 credit hours, including 41 General Education credits
- A minimum of 30 credit hours earned from JMU
- At least 60 credit hours earned from a four-year institution
- IS 498. Individualized Study Project, an online interdisciplinary research course with a capstone project coordinated by the instructor and includes a final written and oral presentation; minimum grade of "C" required
- IS 206. Researching, Writing and Documenting Prior Learning (required for students pursuing credit for prior learning experience only)

Additional requirements:

- A program of study (POS) for meeting the requirements of degree completion must be submitted to the ADP office for approval while enrolled in the IS 200 course.
- A student's concentration, or field of study, consists of a minimum of 30 credits, at least 24 of which must be upper-division credit (300- and 400-level courses). The concentration includes classes from two or more academic disciplines and represent a coherent body of knowledge, which may require course work beyond the 30 minimum credit hours.
- No more than 30 credit hours of course work can be selected from courses taught by the College of Business. This 30 credit hour limit includes COB courses transferred from other colleges and nontraditional credit earned in the COB.
- The concentration must be completed with a GPA of 2.0 or better.
- A minimum of 15 credit hours in the concentration must be JMU credits.
- Students must participate in assessment activities used to measure student learning outcomes and modify curriculum.
- There is no residency requirement; however, program agreements that extend beyond six years may need to be amended if university policies change that affect the original program of study.

Individualized Study Major Concentration

This is the focus area of study in the individualized study major. The concentration is interdisciplinary and comprised of classes from two or more academic program areas to meet each student's educational and/or professional goals.

- Minimum of 30 credits.
- 24 credits must be completed in 300- or 400-level courses.
- IS 498. Individualized Study Project – online interdisciplinary research course with a capstone project, included in the 24 upper-level course requirements.

Mechanisms for Earning Credit

The number of credits, which may be accepted as transfer credit or earned through the following methods, is determined by the student's approved POS. It is reasonable to expect that the unique educational needs, background and personal circumstances of each student will determine to a great extent the manner in which credit has been and will be earned.

- Transfer credit awarded by the registrar's office.

- Credit by departmental examination.
- Credit for approved sponsored learning or independent studies.
- Regular course work.
- Credit for experiential learning through portfolio of prior learning assessment (PLA).*
- Credit for educational programs of the Armed Forces (JST).
- College Level Examination Program (CLEP).*
- American Council on Education College Credit Recommendation Service (ACE).*

*No more than 30 non-traditional credits can be counted towards the degree requirements of 120 credit hours which includes PLA, JST, CLEP and ACE.

Prior Learning Assessment (PLA)

Prior learning assessment (PLA) is an assessment of knowledge and skills acquired prior to or outside of enrollment in higher education for the purpose of earning college-level credit. The term portfolio is used to describe a collection of evidence to support the PLA process. Through the portfolio, a student makes a case by succinctly identifying, articulating and documenting mastery of college level learning or its equivalence.

PLA is an option for a student who has gained significant learning through experiences including, but not limited to: workplace training, volunteer service, civic activities, conferences, workshops, vocational interests, travel and independent reading.

PLA is not an option for everyone. The process entails extensive preparation, excellent academic writing skills and the ability to meet deadlines. Before a portfolio is submitted for approval, students must complete IS 206. Researching, Writing and Documenting Prior Learning. There is no guarantee that a portfolio submitted for credit will be approved.

PLA must be a part of a student's approved POS and does not count towards credit at the four-year institution level or as JMU credit. PLA credit is not transferable to a traditional degree program at JMU.

College Credit Recommendation Service

ADP accepts some but not all credits as recommended in the National Guide to Educational Credit for Training Programs and the Guide to Educational Credit by Examination prepared by the American Council on Education. Additional information on program policies and procedures specific to JST is available through the ADP website.

College-Level Examination Program

Students enrolled in the ADP at JMU may participate in the College-Level Examination Program (CLEP) under certain circumstances and with permission of the director. CLEP is a national program of credit by examination that offers students an opportunity to obtain recognition for achievement in specific college courses. In the ADP, CLEP testing must be a part of a student's approved POS. CLEP credits do not count toward credit at the four-year institution level, toward the 30 credits required from JMU, toward General Education requirements or toward B.A./B.S. degree requirements.

Interested individuals may schedule a CLEP test by directly contacting the Adult Degree Program office.

Credit/No-Credit

Students enrolled in the ADP may complete courses on a credit/no-credit basis if they have completed 28 credit hours of college level course work and have a 2.25 cumulative GPA.

Courses in the area of concentration, including the senior capstone research course, may not be taken on a credit/no-credit basis. Other provisions of the credit/no-credit option, as described in this catalog, will also be in effect.

Online Interdisciplinary Tracks

Online interdisciplinary tracks were developed in cooperation with various academic units at the university. Students can use these tracks when developing their concentration.

- Business and Information Technology
- Small Business Management and Entrepreneurship
- Human Resource Development and Management
- Professional Workplace Communication
- Healthcare Leadership
- Child Development
- Family and Consumer Sciences
- Inclusive Early Childhood Education
- Early Childhood Education Development 2+2 with teacher licensure
- Elementary Education 2+2 with teacher licensure
- Special Education 2+2 with teacher licensure

Program Total: 120 Credit Hours

Individualized Study, B.I.S.

Program Description

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Location: Ice House, 127 W. Bruce Street, Room 332
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The adult degree program (ADP) addresses the needs of adult learners through an innovative, personalized program plan of study and provides students with the opportunity to develop an undergraduate degree that meets their individual educational and professional goals.

Admission

To be eligible for the ADP, applicants must be at least 22 years of age, have at least 30 transferable college credits and have a minimum cumulative GPA of 2.0 for all prior coursework.

With very limited exceptions, students in the individualized study major (the ADP's academic major) cannot transfer to another major at JMU.

Degrees Offered

Students in the ADP have the opportunity to earn a Bachelor of Individualized Study (B.I.S.), a Bachelor of Arts (B.A.) in individualized study or a Bachelor of Science (B.S.) in individualized study. The university degree requirements differ by degree type.

Degree and Major Requirements

The Bachelor of Individualized Study (B.I.S.) requires each student works with the ADP academic adviser to create an individual program of study that includes a minimum of 41 general education credits.

Degree Requirements	Credit Hours
General Education courses	41
Major concentration courses	30
Electives	49
Total	120

Footnotes

- ¹ The General Education: The Human Community program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.
- ² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232), or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures placement test.
- ³ Any PHIL course except PHIL 120 or PHIL 150. Consult the list of courses satisfying Bachelor of Arts degree requirements on the Registrar's website.
- ⁴ Includes education courses leading to licensure in teacher education.
- ⁵ Consult the list of courses satisfying Bachelor of Science degree requirements on the Registrar's website.

Major Requirements

Students must complete:

- IS 200. Individualized Study Major Program Development
 - A minimum of 120 credit hours, including 41 General Education credits
 - A minimum of 30 credit hours earned from JMU
 - At least 60 credit hours earned from a four-year institution
 - IS 498. Individualized Study Project, an online interdisciplinary research course with a capstone project coordinated by the instructor and includes a final written and oral presentation; minimum grade of "C" required
 - IS 206. Researching, Writing and Documenting Prior Learning (required for students pursuing credit for prior learning experience only)
- Additional requirements:

- A program of study (POS) for meeting the requirements of degree completion must be submitted to the ADP office for approval while enrolled in the IS 200 course.
- A student's concentration, or field of study, consists of a minimum of 30 credits, at least 24 of which must be upper-division credit (300- and 400-level courses). The concentration includes classes from two or more academic disciplines and represent a coherent body of knowledge, which may require course work beyond the 30 minimum credit hours.
- No more than 30 credit hours of course work can be selected from courses taught by the College of Business. This 30 credit hour limit includes COB courses transferred from other colleges and nontraditional credit earned in the COB.
- The concentration must be completed with a GPA of 2.0 or better.
- A minimum of 15 credit hours in the concentration must be JMU credits.
- Students must participate in assessment activities used to measure student learning outcomes and modify curriculum.
- There is no residency requirement; however, program agreements that extend beyond six years may need to be amended if university policies change that affect the original program of study.

Individualized Study Major Concentration

This is the focus area of study in the individualized study major. The concentration is interdisciplinary and comprised of classes from two or more academic program areas to meet each student's educational and/or professional goals.

- Minimum of 30 credits.
- 24 credits must be completed in 300- or 400-level courses.
- IS 498. Individualized Study Project – online interdisciplinary research course with a capstone project, included in the 24 upper-level course requirements.

Mechanisms for Earning Credit

The number of credits, which may be accepted as transfer credit or earned through the following methods, is determined by the student's approved POS. It is reasonable to expect that the unique educational needs, background and personal circumstances of each student will determine to a great extent the manner in which credit has been and will be earned.

- Transfer credit awarded by the registrar's office.
- Credit by departmental examination.
- Credit for approved sponsored learning or independent studies.
- Regular course work.
- Credit for experiential learning through portfolio of prior learning assessment (PLA).*
- Credit for educational programs of the Armed Forces (JST).
- College Level Examination Program (CLEP).*
- American Council on Education College Credit Recommendation Service (ACE).*

*No more than 30 non-traditional credits can be counted towards the degree requirements of 120 credit hours which includes PLA, JST, CLEP and ACE.

Prior Learning Assessment (PLA)

Prior learning assessment (PLA) is an assessment of knowledge and skills acquired prior to or outside of enrollment in higher education for the purpose of earning college-level credit. The term portfolio is used to describe a collection of evidence to support the PLA process. Through the portfolio, a student makes a case by succinctly identifying, articulating and documenting mastery of college level learning or its equivalence.

PLA is an option for a student who has gained significant learning through experiences including, but not limited to: workplace training, volunteer service, civic activities, conferences, workshops, vocational interests, travel and independent reading.

PLA is not an option for everyone. The process entails extensive preparation, excellent academic writing skills and the ability to meet deadlines. Before a portfolio is submitted for approval, students must complete IS 206. Researching, Writing and Documenting Prior Learning. There is no guarantee that a portfolio submitted for credit will be approved.

PLA must be a part of a student's approved POS and does not count towards credit at the four-year institution level or as JMU credit. PLA credit is not transferable to a traditional degree program at JMU.

College Credit Recommendation Service

ADP accepts some but not all credits as recommended in the National Guide to Educational Credit for Training Programs and the Guide to Educational Credit by Examination prepared by the American Council on Education. Additional information on program policies and procedures specific to JST is available through the ADP website.

College-Level Examination Program

Students enrolled in the ADP at JMU may participate in the College-Level Examination Program (CLEP) under certain circumstances and with permission of the director. CLEP is a national program of credit by examination that offers students an opportunity to obtain recognition for achievement in specific college courses. In the ADP, CLEP testing must be a part of a student's approved POS. CLEP credits do not count toward credit at the four-year institution level, toward the 30 credits required from JMU, toward General Education requirements or toward B.A./B.S. degree requirements.

Interested individuals may schedule a CLEP test by directly contacting the Adult Degree Program office.

Credit/No-Credit

Students enrolled in the ADP may complete courses on a credit/no-credit basis if they have completed 28 credit hours of college level course work and have a 2.25 cumulative GPA.

Courses in the area of concentration, including the senior capstone research course, may not be taken on a credit/no-credit basis. Other provisions of the credit/no-credit option, as described in this catalog, will also be in effect.

Online Interdisciplinary Tracks

Online interdisciplinary tracks were developed in cooperation with various academic units at the university. Students can use these tracks when developing their concentration.

- Business and Information Technology
- Small Business Management and Entrepreneurship
- Human Resource Development and Management
- Professional Workplace Communication
- Healthcare Leadership
- Child Development
- Family and Consumer Sciences
- Inclusive Early Childhood Education
- Early Childhood Education Development 2+2 with teacher licensure
- Elementary Education 2+2 with teacher licensure
- Special Education 2+2 with teacher licensure

Education, Early Childhood Education Development, A.A.S. to B.I.S. ECED 2+2

This fully online program is for students who have completed an A.A.S. degree in early childhood from a Virginia Community College. It leads to licensure in grades PK-3 and a Bachelor of Individualized Study degree with a concentration in early childhood education development from JMU.

60 credits must be earned at a 4-year institution and 30 of those must be earned at JMU.

All students must attend an orientation meeting at JMU the semester or summer prior to starting the program. This orientation will be offered online. Program offers free tutoring for Praxis math core and Praxis subject exam, VCLA and RVE.

Practicum courses are to extend through the full semester and are one full day a week.

Student teaching is 10 weeks with the possibility of teaching in your own classroom.

Recommended Schedule for Majors

Fall Junior Year

No practicum but must have access to children for assignments in the following courses. Grades PK-1 are preferable.

ECED 372. Introduction to Early Childhood Education **Credits: 3.00**
EXED 490. Special Studies in Special Education **Credits: 1.00 - 3.00**
GEOG 200. Geography: The Global Dimension [C4GE] **Credits: 3.00**
LED 355. Inclusive Early Literacy Development and Acquisition **Credits: 3.00**

Spring Junior Year

ECED 304. Diversity, Equity and Justice in Early Childhood Education **Credits: 3.00**
ECED 442. The Young Child **Credits: 3.00**
ECED 443. Practicum in Primary Grades **Credits: 1.00**

EXED 402. Positive Behavior Supports and Individualized Interventions for Young Children **Credits: 1.00-3.00**

LED 456. Inclusive Literacy Learning in the Primary Grades **Credits: 3.00**

Summer Junior Year

HIST 102. World History Since 1500 [C2HQC] **Credits: 3.00**

HTH 100. Personal Wellness [C5W] **Credits: 3.00**

or

KIN 100. Lifetime Fitness and Wellness (2,2) [C5W] **Credits: 3.00**

ISCI 172. Physical Science for Teachers [C3PP] **Credits: 3.00**

SCOM 121. Fundamental Human Communication: Presentations [C1HC] **Credits: 3.00**

Fall Senior Year

ECED 412. Natural and Social Sciences for Young Children **Credits: 3.00**

ECED 444. Mathematics Content and Pedagogy for Early Childhood Education I **Credits: 3.00**

ECED 445. Mathematics Content and Pedagogy for Early Childhood Education II **Credits: 3.00**

ECED 461. Integrated Day Practicum **Credits: 1.00**

Spring Senior Year

ECED 480. Student Teaching ECED **Credits: 8.00**

IS 498. Individualized Study Project **Credits: 3.00 - 6.00** (*must be taken for 3.00 credit hours*)

Summer Senior Year

HIST 150. Critical Issues in Recent Global History [C1CT] **Credits: 3.00**

or

PHIL 150. Ethical Reasoning [C1CT] **Credits: 3.00**

or

PHIL 120. Critical Thinking [C1CT] **Credits: 3.00**

ART 200. Art in General Culture [C2VPA] **Credits: 3.00**

or

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

or

MUS 200. Music and Culture [C2VPA] **Credits: 3.00**

Education, Elementary Education, Associate's to B.I.S. ELED 2+2

This fully online program is for students who are working as instructional assistants in schools and have 60 credits and/or have completed an associate's degree. It leads to licensure in grades PK-6 and a Bachelor of Individualized Study degree with a concentration in elementary education from JMU. 60 credits must be earned at a 4-year institution and 30 of those must be earned at JMU.

All students must attend an orientation meeting prior to starting the program. Program offers free tutoring for all licensure exams.

Elementary Education Practicum Requirements: 3 Credit Hours

Practicum courses are to extend through the full semester and the amount of time increases with each experience. Student teaching is 14 weeks with the possibility of teaching in your own classroom.

ELED 321. Practicum with a Focus on Learners and Learning **Credits: 1.00-3.00** (*must be taken for 1.00 credit hour*)

ELED 322. Practicum with a Focus on Curriculum Integration and Guiding Behavior **Credits: 1.00-3.00** (*must be taken for 1.00 credit hour*)

ELED 400. Elementary Education Final Practicum **Credits: 1.00** (*must be taken once for a total of 1.00 credit hours*)

Elementary Education Content Requirements: 50 Credit Hours

ELED 272. Introduction to Early and Elementary Education **Credits: 3.00**

ELED 310. Diversity in Elementary Education **Credits: 3.00**

ELED 332. Children and Science **Credits: 3.00**

ELED 333. Children and Mathematics I **Credits: 3.00**

ELED 334. Children and Social Studies **Credits: 3.00**

ELED 343. Children and Mathematics II **Credits: 3.00**

ELED 450. Planning Instruction and Assessment **Credits: 3.00**

ELED 455. Home, School, Communities **Credits: 3.00**

ELED 480. Student Teaching in Elementary Education **Credits: 8.00**

ELED 485. Guiding Student Behavior: Responsive Classroom Management **Credits: 3.00**

IS 498. Individualized Study Project **Credits: 3.00 - 6.00** (*must be taken for 3.00 credit hours*)

LED 300. Reading Instruction and Assessment for Diverse Learners PK-6 **Credits: 3.00**

LED 350. Writing Instruction, Assessment and Technology for Diverse Learners PK-6 **Credits: 3.00**

LED 462. Disciplinary Literacy for Diverse Classrooms PK-6 **Credits: 3.00**¹

EXED 490. Special Studies in Special Education **Credits: 1.00 - 3.00**

Footnote

¹ EXED 490 must be taken for 3 credits

Additional Requirements

If students did not complete the following course work prior to attending JMU, these courses must be taken:

EDUC 200. Foundations of Education in the United States **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**

Education, Special Education, Associate's to B.I.S. SPED 2+2

The Bachelor of Individualized Study with a concentration in special education is a fully online program designed to enable individuals currently working as instructional assistants in Virginia schools to obtain a bachelor's degree and a teaching license in both special education K-12: accessing the general curriculum and special education K-12: adapted curriculum. Students must have a transferable associate's degree to complete the program as described.

The program focuses on developing teachers who are knowledgeable about the characteristics, diagnosis and remediation of children with disabilities accessing the general education curriculum and in adapted curriculum settings. They will learn from dedicated and engaged faculty members in synchronous online courses.

The licensure program is designed to prepare resilient, culturally-responsive educators who are advocates for children and youth with disabilities and who are not only qualified for the complexity of their professional roles but also are reflective problem solvers.

Assessment of candidate performance includes evaluation of performance in individual courses. Students are required to demonstrate satisfactory performance, which includes a minimum grade of "C" in all major and concentration coursework and a "satisfactory" score on all key assessments. Key assessments and course grades will be used to identify those candidates who are not making satisfactory progress toward advancement to the next sequence of courses. The assessments will be used to advise candidates and develop a plan of action to address and support any concerns that have been identified by the faculty. In some cases, a candidate will be allowed to continue in the next semester, but there will be a plan of action for addressing any concerns that have been identified by the faculty.

Every student is assigned an adviser. Students should plan on consulting their adviser regularly.

Core Special Education K-12 Courses

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**

EXED 341. Characteristics of Learners with Disabilities Accessing the General Curriculum **Credits: 3.00**

EXED 342. Characteristics of Learners with Low Incidence Disabilities Accessing the Adapted Curriculum **Credits: 3.00**

EXED 401. Issues in Exceptional Education **Credits: 1.00 - 3.00** *Must be taken for 3.00 credit hours*

EXED 407. Transitions of Learners with Disabilities **Credits: 3.00 - 4.00** *Must be taken for 3.00 credit hours*

EXED 474. Assessment and Evaluation in Special Education **Credits: 3.00**

EXED 475. Program Planning in Special Education **Credits: 3.00**

EXED 480. Student Teaching in Special Education **Credits: 3.00 - 6.00** *must be taken twice for a total of 6.00 credits*

EXED 484. Inclusive Practices in Special Education **Credits: 3.00-4.00** *Must be taken for 3.00 credit hours*

IS 498. Individualized Study Project **Credits: 3.00 - 6.00**

LED 430. Development, Assessment and Instruction of Literacy: K-12 **Credits: 3.00**

Total Credits: 42 Credit Hours

Accessing the General Curriculum Courses

EXED 450. Principles of Specialized Reading Instruction **Credits: 3.00**

EXED 477. Remedial Methods in Special Education **Credits: 3.00**

MAED 430. Teaching Mathematics in Grades K-12 **Credits: 3.00**

Total Credits: 9 Credit Hours

Adapted Curriculum Courses

EXED 343. Communication Language and Literacy for Learners on the Adapted Curriculum **Credits: 3.00**
EXED 429. Teaching Learners with Complex Care Needs **Credits: 3.00**
EXED 473. Methods of Instruction for Learners Accessing the Adapted Curriculum **Credits: 3.00**

Total Credits: 9 Credit Hours

Total Program Credits: 60 Credit Hours
Additional Requirements

Courses required for licensure that need to be taken if not done prior to beginning the program
EDUC 200. Foundations of Education in the United States **Credits: 3.00**
EXED 200. Foundations of Exceptional Education **Credits: 3.00**
PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**
WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**

Inclusive Early Childhood Education, Associates to B.I.S. IECE 2+2

This program is a Bachelor's of Individualized Study with a concentration in inclusive early childhood education. Students completing this program are prepared to serve as teachers of students with and without disabilities in a variety of educational placements and service delivery models including early intervention, hospital education, ESCE and public elementary settings. It is designed for students who have earned their associate's degree and are working as instructional assistants. Completers of this program earn a four-year degree and are eligible for a Virginia teaching license in areas birth-age 5 special education and PK-3rd grade general education.
EDUC 200. Foundations of Education in the United States **Credits: 3.00**
EDUC 310. Teaching in a Diverse Society **Credits: 3.00**
EXED 200. Foundations of Exceptional Education **Credits: 3.00**
EXED 429. Teaching Learners with Complex Care Needs **Credits: 3.00**
IECE 300. Issues and Trends in Inclusive Early Childhood Education **Credits: 3.00**
IECE 303. Development of Young Children Birth Through Age 8 **Credits: 3.00**
IECE 322. Curriculum and Instruction in Inclusive Early Childhood Education **Credits: 3.00**
IECE 324. Assessment of the Young Child **Credits: 3.00**
IECE 450. Contemporary Family Issues in Inclusive Education **Credits: 3.00**
IECE 460. Instructional Practices in Numeracy **Credits: 3.00**
IECE 462. Instructional Practices in Natural Sciences for Young Children **Credits: 3.00**
IECE 464. Instructional Practices in Social Studies for Young Children **Credits: 3.00**
IECE 466. Managing Classrooms and Guiding Behavior **Credits: 3.00**
IECE 470. Individualized Behavior Intervention for Young Children **Credits: 3.00**
IECE 480. Student Teaching in Inclusive Early Childhood Education **Credits: 5.00 must be take twice for a total of 10.00 credit hours**
IECE 481. Seminar in Inclusive Early Childhood Education **Credits: 3.00**
LED 355. Inclusive Early Literacy Development and Acquisition **Credits: 3.00**
LED 456. Inclusive Literacy Learning in the Primary Grades **Credits: 3.00**
PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

Total: 64 Credit Hours
Additional Credits

Courses required for licensure that need to be taken if not done prior to beginning the program
WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**

Program Total: 120 Credit Hours

Individualized Study, B.S.

Program Description

Phone: (540) 568- 4253
Email: adp@jmu.edu
Location: Ice House, 127 W. Bruce Street, Room 332
Website: <http://www.jmu.edu/adultdegree>

Mission

The adult degree program (ADP) addresses the needs of adult learners through an innovative, personalized program plan of study and provides students with the opportunity to develop an undergraduate degree that meets their individual educational and professional goals.

Admission

To be eligible for the ADP, applicants must be at least 22 years of age, have at least 30 transferable college credits and have a minimum cumulative GPA of 2.0 for all prior coursework.

With very limited exceptions, students in the individualized study major (the ADP's academic major) cannot transfer to another major at JMU.

Degrees Offered

Students in the ADP have the opportunity to earn a Bachelor of Individualized Study (B.I.S.), a Bachelor of Arts (B.A.) in individualized study or a Bachelor of Science (B.S.) in individualized study. The university degree requirements differ by degree type.

Degree and Major Requirements

The Bachelor of Science (B.S.) in individualized study requires 41 general education credits, an additional scientific literacy course (3.00 credit hours) and an additional quantitative course (3.00 credit hours).

Degree Requirements	Credit Hours
General Education courses ¹	41
Quantitative requirement (in addition to General Education courses) ²	3

Degree Requirements	Credit Hours
Scientific Literacy requirement (in addition to General Education courses) ²	3-4
Major concentration courses and electives ³	73-77
Total	120

Footnotes

¹ The General Education: The Human Community program contains a set of requirements each student must fulfill. Some credits may be fulfilled by courses required within the major.

² Consult the list of courses satisfying Bachelor of Science degree requirements on the Registrar's website.

³ Includes education courses leading to licensure in teacher education.

Major Requirements

Students must complete:

- IS 200. Individualized Study Major Program Development
- A minimum of 120 credit hours, including 41 General Education credits
- A minimum of 30 credit hours earned from JMU
- At least 60 credit hours earned from a four-year institution
- IS 498. Individualized Study Project, an online interdisciplinary research course with a capstone project coordinated by the instructor and includes a final written and oral presentation; minimum grade of "C" required
- IS 206. Researching, Writing and Documenting Prior Learning (required for students pursuing credit for prior learning experience only)

Additional requirements:

- A program of study (POS) for meeting the requirements of degree completion must be submitted to the ADP office for approval while enrolled in the IS 200 course.
- A student's concentration, or field of study, consists of a minimum of 30 credits, at least 24 of which must be upper-division credit (300- and 400-level courses). The concentration includes classes from two or more academic disciplines and represent a coherent body of knowledge, which may require course work beyond the 30 minimum credit hours.
- No more than 30 credit hours of course work can be selected from courses taught by the College of Business. This 30 credit hour limit includes COB courses transferred from other colleges and nontraditional credit earned in the COB.
- The concentration must be completed with a GPA of 2.0 or better.
- A minimum of 15 credit hours in the concentration must be JMU credits.
- Students must participate in assessment activities used to measure student learning outcomes and modify curriculum.
- There is no residency requirement; however, program agreements that extend beyond six years may need to be amended if university policies change that affect the original program of study.

Individualized Study Major Concentration

This is the focus area of study in the individualized study major. The concentration is interdisciplinary and comprised of classes from two or more academic program areas to meet each student's educational and/or professional goals.

- Minimum of 30 credits.
- 24 credits must be completed in 300- or 400-level courses.
- IS 498. Individualized Study Project – online interdisciplinary research course with a capstone project, included in the 24 upper-level course requirements.

Mechanisms for Earning Credit

The number of credits, which may be accepted as transfer credit or earned through the following methods, is determined by the student's approved POS. It is reasonable to expect that the unique educational needs, background and personal circumstances of each student will determine to a great extent the manner in which credit has been and will be earned.

- Transfer credit awarded by the registrar's office.
- Credit by departmental examination.
- Credit for approved sponsored learning or independent studies.
- Regular course work.
- Credit for experiential learning through portfolio of prior learning assessment (PLA).*
- Credit for educational programs of the Armed Forces (JST).
- College Level Examination Program (CLEP).*
- American Council on Education College Credit Recommendation Service (ACE).*

*No more than 30 non-traditional credits can be counted towards the degree requirements of 120 credit hours which includes PLA, JST, CLEP and ACE.

Prior Learning Assessment (PLA)

Prior learning assessment (PLA) is an assessment of knowledge and skills acquired prior to or outside of enrollment in higher education for the purpose of earning college-level credit. The term portfolio is used to describe a collection of evidence to support the PLA process. Through the portfolio, a student makes a case by succinctly identifying, articulating and documenting mastery of college level learning or its equivalence.

PLA is an option for a student who has gained significant learning through experiences including, but not limited to: workplace training, volunteer service, civic activities, conferences, workshops, vocational interests, travel and independent reading.

PLA is not an option for everyone. The process entails extensive preparation, excellent academic writing skills and the ability to meet deadlines. Before a portfolio is submitted for approval, students must complete IS 206. Researching, Writing and Documenting Prior Learning. There is no guarantee that a portfolio submitted for credit will be approved.

PLA must be a part of a student's approved POS and does not count towards credit at the four-year institution level or as JMU credit. PLA credit is not transferable to a traditional degree program at JMU.

College Credit Recommendation Service

ADP accepts some but not all credits as recommended in the National Guide to Educational Credit for Training Programs and the Guide to Educational Credit by Examination prepared by the American Council on Education. Additional information on program policies and procedures specific to JST is available through the ADP website.

College-Level Examination Program

Students enrolled in the ADP at JMU may participate in the College-Level Examination Program (CLEP) under certain circumstances and with permission of the director. CLEP is a national program of credit by examination that offers students an opportunity to obtain recognition for achievement in specific college courses. In the ADP, CLEP testing must be a part of a student's approved POS. CLEP credits do not count toward credit at the four-year institution level, toward the 30 credits required from JMU, toward General Education requirements or toward B.A./B.S. degree requirements.

Interested individuals may schedule a CLEP test by directly contacting the Adult Degree Program office.

Credit/No-Credit

Students enrolled in the ADP may complete courses on a credit/no-credit basis if they have completed 28 credit hours of college level course work and have a 2.25 cumulative GPA.

Courses in the area of concentration, including the senior capstone research course, may not be taken on a credit/no-credit basis. Other provisions of the credit/no-credit option, as described in this catalog, will also be in effect.

Online Interdisciplinary Tracks

Online interdisciplinary tracks were developed in cooperation with various academic units at the university. Students can use these tracks when developing their concentration.

- Business and Information Technology
- Small Business Management and Entrepreneurship
- Human Resource Development and Management
- Professional Workplace Communication
- Healthcare Leadership
- Child Development
- Family and Consumer Sciences
- Inclusive Early Childhood Education
- Early Childhood Education Development 2+2 with teacher licensure
- Elementary Education 2+2 with teacher licensure
- Special Education 2+2 with teacher licensure

Program Total: 120 Credit Hours

Cross Disciplinary Program

Biotechnology, B.S.

Program Description

Dr. Kyle Seifert, **Academic Unit Head, Biology/Biotechnology**
Phone: (540) 568-6733
Email: seiferkx@jmu.edu
Location: Biosciences Building, Room 2001

Mission

JMU Biotechnology is a 4-year interdisciplinary major leading to a bachelor of science degree. The program is shared among the Departments of Biology, Chemistry and Biochemistry and Integrated Science and Technology (ISAT). Students undertake a rigorous curriculum rich with hands-on laboratory experiences, critical analyses of both the "how" and the "why" of biotechnological solutions, and the development of transferable skills needed to keep up in a rapidly changing field. The combination of both scientific/technical depth and cross-disciplinary breadth allow graduates to pursue diverse career paths in industry, government and advanced studies.

Biotechnology majors complete 47-50 credit hours of science foundation courses, 17 credit hours of biotechnology transition and core courses, and 15 credit hours of electives. Advanced courses are selected from an extensive list of Biology, Chemistry and Biochemistry, ISAT, Engineering and Mathematics and Statistics offerings. Students work with assigned academic advisers to develop individualized portfolios of upper level courses that best suit their unique interests and goals. Up to six credits of biotechnology undergraduate research or internship experiences can be applied to the upper level electives requirement.

Students are eligible to apply for the General Business Minor. Students may not receive dual credit toward the Biotechnology major for 300- and 400-level Biology courses that are also applied toward the Biology major. Biotechnology students pursuing a minor in ISAT may not substitute 100-level Biology or Chemistry courses for ISAT foundation courses. Biotechnology majors are not eligible for the Biochemistry and Molecular Biology Minor.

Degree and Major Requirements

Degree Requirements	Credit Hours
General Education ^{1, 2}	41
Quantitative requirement ^{3, 4}	3

Degree Requirements	Credit Hours
Scientific Literacy requirement ^{3, 4}	3-4
Major requirements (listed below) and electives	79-82
Total	120

Footnotes

¹ The General Education program contains a set of requirements that each student must fulfill. Some credits may be fulfilled by courses required within the major.

² Cluster 3 required courses can be fulfilled within the major requirements and do not require additional credit hours.

³ In addition to General Education.

⁴ The quantitative and scientific literacy requirements are fulfilled within the major requirements and do not require additional credit hours.

Major Requirements

Science Foundation Courses

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00 and**
 CHEM 132. General Chemistry II **Credits: 3.00**
 CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00 and**
 CHEM 132L. General Chemistry Laboratory **Credits: 1.00**
 CHEM 241. Organic Chemistry I **Credits: 3.00**
 CHEM 242. Organic Chemistry II **Credits: 3.00 and**
 CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**
 BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
 BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
 BIO 150. Foundations of Biology II **Credits: 3.00 and**
 BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**
 BIO 240. Genetics **Credits: 3.00 and**
 BIO 240L. Genetics Laboratory **Credits: 1.00**
 BIO 245. General Microbiology **Credits: 3.00 and**
 BIO 245L. General Microbiology Laboratory **Credits: 1.00**

Note

Students who wish to take *BIO 250/BIO 250L* in lieu of *BIO 245/BIO 245L* are encouraged to seek approval for this substitution from the biotechnology program director.

Choose one of the following sets of courses:

PHYS 140. College Physics I [C3PP] **Credits: 3.00 and**
 PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00 and**
 PHYS 150. College Physics II **Credits: 3.00 and**
 PHYS 150L. General Physics Laboratory **Credits: 1.00**
 or
 PHYS 240. University Physics I [C3PP] **Credits: 3.00 and**
 PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00 and**

PHYS 250. University Physics II **Credits: 3.00 and**
 PHYS 250L. University Physics Laboratory II **Credits: 1.00**

Choose one of the following sets of courses:

MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00 and**
 MATH 232. Calculus with Functions II **Credits: 3.00**
 or
 MATH 233. Calculus with Modeling I [C3QR] **Credits: 3.00 and**
 MATH 234. Calculus with Modeling II **Credits: 3.00**
 or
 MATH 235. Calculus I [C3QR] **Credits: 4.00**

Choose one of the following courses:

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**
 MATH 285. Data Analysis **Credits: 4.00**

Total: 47-50 Credit Hours

Biotechnology Transition and Core Courses

BIOT 260. Biotechnology Seminar **Credits: 1.00**
 ISAT 305. Instrumentation and Measurement in Biotechnology (0, 2) **Credits: 1.00**
 ISAT 451. Biotechnology in Industry and Agriculture **Credits: 3.00**
 ISAT 456. Ethical, Legal and Social Implications of Biotechnology **Credits: 3.00**
 CHEM 361. Biochemistry I **Credits: 3.00**
 CHEM 366L. Biochemistry Laboratory **Credits: 2.00**
 BIO 480. Advanced Molecular Biology **Credits: 3.00**
 BIO 480L. Advanced Molecular Biology Lab **Credits: 1.00**

Total: 17 Credit Hours

Biotechnology Elective Courses

Select 15 credit hours:

Up to 6 credits of undergraduate research or internship experiences can be applied to the upper level electives requirement.

BIO 204. Viral Genome and Bioinformatics **Credits: 2.00**
 or
 ISAT 204. Viral Genome and Bioinformatics **Credits: 2.00**
 BIO 301. Introductory Neuroscience **Credits: 3.00**
 BIO 316. Animal Development **Credits: 3.00**
 BIO 324. Human Genetics **Credits: 3.00**
 BIO 342. Mathematical Models in Biology **Credits: 3.00**
 or
 MATH 342. Mathematical Models in Biology **Credits: 3.00**
 BIO 343. Immunology **Credits: 3.00**
 BIO 343L. Immunology Laboratory **Credits: 1.00**
 BIO 348. Medical Microbiology **Credits: 3.00**
 BIO 348L. Medical Microbiology Laboratory **Credits: 1.00**
 BIO 360. Plant Biology **Credits: 3.00**
 BIO 364. Human Uses of Plants **Credits: 3.00**
 BIO 364L. Laboratory in Human Uses of Plants **Credits: 1.00**
 BIO 370. Animal Physiology **Credits: 4.00**

BIO 387. Environmental Microbiology **Credits: 3.00**
 BIO 387L. Environmental Microbiology Laboratory **Credits: 1.00**
 BIO 420. Medical Parasitology **Credits: 3.00**
 BIO 432. Light Microscopy **Credits: 4.00**
 BIO 444. Virology **Credits: 3.00**
 BIO 445. Neurobiology **Credits: 4.00**
 BIO 446. Experimental Neurobiology **Credits: 4.00**
 BIO 447. Evolution and Ecology of Infectious Disease **Credits: 3.00**
 BIO 451. Current Topics in Human Development and Evolution **Credits: 3.00**
 BIO 454. Introduction to Biometrics **Credits: 4.00**
 BIO 455. Plant Physiology **Credits: 4.00**
 BIO 460. Plant Biotechnology **Credits: 4.00**
 BIO 472. Human Metabolism **Credits: 3.00**
 BIO 477. The Genetics of Cancer **Credits: 3.00**
 BIO 481. Genomics **Credits: 4.00**
 BIO 482. Human Histology **Credits: 4.00**
 BIO 483. Bioinformatics **Credits: 4.00**
 BIO 490. Mechanics of Animal Movement **Credits: 4.00**
 BIOT 495. Techniques in Biotechnology **Credits: 1.00**
 BIOT 496. Biotechnology Literature Research **Credits: 1.00**
 BIOT 497. Research in Biotechnology **Credits: 1.00**
 BIOT 499A. Honors Capstone Project **Credits: 1.00**
 BIOT 499B. Honors Capstone Project **Credits: 2.00**
 BIOT 499C. Honors Capstone Project **Credits: 3.00**
 CHEM 270. Inorganic Chemistry I **Credits: 3.00**
 CHEM 331. Physical Chemistry I **Credits: 3.00**
 CHEM 336L. Applied Physical Chemistry Laboratory **Credits: 2.00**
 CHEM 351. Analytical Chemistry **Credits: 4.00**
 CHEM 352. Instrumental Analysis **Credits: 3.00**
 CHEM 352L. Instrumental Analysis Laboratory **Credits: 2.00**
 CHEM 362. Biochemistry II **Credits: 3.00**
 CHEM 440. Intermediate Organic Chemistry **Credits: 3.00**
 CHEM 445. Polymer Chemistry **Credits: 3.00**
 CHEM 450. Nuclear and Radiation Chemistry **Credits: 3.00**
 ENGR 472. Environmental Engineering **Credits: 3.00**
 ENGR 498. Advanced Topics in Engineering **Credits: 1.00-3.00** (*select topics, such as bioprocess engineering*)
 ISAT 351. Biotechnology for the New Millennium II **Credits: 3.00**
 ISAT 452. Medical Biotechnology **Credits: 3.00**
 ISAT 454. Computer Applications in Biotechnology **Credits: 3.00**
 ISAT 455. Regulatory Issues Biotechnology **Credits: 3.00**
 ISAT 459. Awareness and Understanding of Chemical, Biological, and Radiological Weapons of Mass Destruction **Credits: 3.00**
 ISAT 485. Gender Issues in Science **Credits: 3.00**
 MATH 318. Introduction to Probability and Statistics **Credits: 4.00**
 MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**
 MATH 322. Applied Linear Regression **Credits: 3.00**
 MATH 421. Applied Multivariate Statistical Analysis **Credits: 3.00**
 MATH 485. Selected Topics **Credits: 1.00 - 4.00**

Additional Information

When choosing additional 300-400 level courses to complete the credit hour requirement, students are strongly encouraged to discuss their career interests with an adviser who can help select courses best suited to their needs.

Students are encouraged to participate in independent biotechnology research courses with a faculty mentor, though a maximum of six credits of BIOT 495, BIOT 496, BIOT 497, BIOT 499A, BIOT 499B and BIOT 499C can be counted toward the biotechnology major.

Recommended Schedule for Majors

First semester, first year biotechnology majors are encouraged to start with a 14-15 hour course load. This will generally include a biology course (four credit hours), CHEM 131 and CHEM 131L, and/or a math course, plus General Education. In some cases, the general chemistry sequence may be postponed when math placement scores suggest that the development of quantitative reasoning skills should come first. The work load may then be adjusted in the second semester based on the level of success in the first semester.

First Year

Note: Other recommended first-year courses include BIO 203 or ISAT 203 and BIO 204 or ISAT 204. The total credit hours listed below do not reflect this recommendation.

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
 BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
 BIO 150. Foundations of Biology II **Credits: 3.00 and**
 BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**
 CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**¹
 CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**¹
 CHEM 132. General Chemistry II **Credits: 3.00**
 CHEM 132L. General Chemistry Laboratory **Credits: 1.00**
 Quantitative course **Credits: 4.00-6.00**¹
 General Education: Cluster One **Credits: 9.00**

Total: 29-31 Credit Hours

Footnote

¹ Fulfills General Education: Cluster Three. Some students may be advised to postpone their general chemistry courses if their math placement scores are not sufficiently high.

Second Year

BIOT 260. Biotechnology Seminar **Credits: 1.00**
 ISAT 305. Instrumentation and Measurement in Biotechnology (0, 2) **Credits: 1.00**
 BIO 240. Genetics **Credits: 3.00**
 BIO 245L. General Microbiology Laboratory **Credits: 1.00**
 CHEM 241. Organic Chemistry I **Credits: 3.00**
 CHEM 242. Organic Chemistry II **Credits: 3.00**
 CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**
 Quantitative course **Credits: 3.00-4.00**
 General Education: from Clusters Two, Four and Five **Credits: 9.00**

Total: 30-31 Credit Hours

Third Year

CHEM 361. Biochemistry I **Credits: 3.00**
 or

BIO 361. Biochemistry I **Credits: 3.00**
CHEM 366L. Biochemistry Laboratory **Credits: 2.00**
BIO 480. Advanced Molecular Biology **Credits: 3.00**
Biotechnology Electives **Credits: 4.00**
Physics courses **Credits: 8.00**
General Education: from Clusters Two, Four and Five **Credits: 7.00**
Electives **Credits: 4.00**

Total: 32 Credit Hours

Fourth Year

ISAT 451. Biotechnology in Industry and Agriculture **Credits: 3.00**
ISAT 456. Ethical, Legal and Social Implications of Biotechnology **Credits: 3.00**
Biotechnology Electives **Credits: 11.00**
General Education: from Clusters Two, Four and Five **Credits: 6.00**
Electives **Credits: 6.00**

Total: 29 Credit Hours

Program Total: 120 Credit Hours

Pre-Professional Health Advising

Sharon Babcock, **Director**
Phone: (540) 568-6652
Email: pph@jmu.edu
Website: <http://www.jmu.edu/pph>

Pre-professional health (PPH) advising offers programs and services for undergraduate students who are preparing for professional health careers that require masters or doctoral education. PPH minors outline the courses, activities, experiences, and competencies associated with successful admission to graduate professional programs. PPH advisers assist students with academic planning, career-related exploration and decision-making, and constructing a competitive application to graduate professional programs. Application advising and evaluation services are offered to current students and alumni.

Health profession schools are interested in the overall scope and quality of an applicant's undergraduate performance. PPH students are encouraged to select a major based on interests and aptitudes. Regardless of baccalaureate degree or major program, competitive applicants must demonstrate excellence in academic accomplishments, prerequisite courses, career exploration, health-related experience, community service and standardized admission tests. Quality letters of recommendation are also fundamental to a competitive application. Thus, PPH students are encouraged to establish mentoring relationships with faculty, clinicians and supervisors.

Incoming first year and transfer students can declare interest in a PPH program without departmental review. Requests from current students to declare a PPH

minor are reviewed prior to assigning an adviser. If the minor has admission standards, those standards are reviewed prior to approving a declaration request from a current student.

Pre-forensics studies is an advisory program for students interested in careers in forensic science. Students preparing for graduate education in forensics are encouraged to select a major in a discipline of interest. Numerous science disciplines (e.g., anthropology, biology, chemistry, computer science, engineering, physics and psychology) and health professions (e.g., dentistry, medicine and nursing) contribute specialized knowledge and techniques to the investigation of crime and legal proceedings.

Pre-Athletic Training Minor

Phone: (540) 568-6652
Email: pph@jmu.edu

Declaring Pre-Athletic Training (Admission Standards)

Incoming first-year and transfer students can declare pre-athletic training without verification from PPH Advising. Current students can declare the pre-athletic training minor through MyMadison without needing further approval.

Additional Information

Requirements for the pre-athletic training minor are based on the prerequisite courses of 79 Athletic Training Education Programs in 17 states (CT, DE, FL, GA, MA, MD, ME, NC, NH, NJ, NY, PA, SC, TN, VA, VT and WV). Students should review individual athletic training programs' prerequisites to assure completion of all prerequisite course work.

Courses: 33 Credit Hours

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
BIO 270. Human Physiology [C3NS] **Credits: 3.00 and**
BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**
BIO 290. Human Anatomy **Credits: 3.00 and**
BIO 290L. Human Anatomy Laboratory **Credits: 1.00**
CHEM 131. General Chemistry I [C3PP] **Credits: 3.00 and**
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

HTH 210. Medical Terminology **Credits: 3.00**

KIN 302. Exercise Physiology **Credits: 3.00 and**
KIN 302L. Exercise Physiology Laboratory **Credits: 1.00**

NUTR 280. Nutrition for Wellness **Credits: 3.00**

PHYS 140. College Physics I [C3PP] **Credits: 3.00 and**
PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**

PSYC 101. General Psychology [C5SD] **Credits: 3.00**

Biomechanics: 4 Credit Hours

KIN 306. Human Biomechanics **Credits: 3.00** and

KIN 306L. Human Biomechanics Laboratory **Credits: 1.00**

Mathematics: 3 Credit Hours

Choose one of the following:

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**

Writing and Literature: 6 Credit Hours

WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**

One literature course from [C2L] ENG or HUM **Credits: 3.00**

Recommended electives (not required):

ATEP 205. Introduction to Athletic Training **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

Total: 46 Credit Hours

Pre-Dentistry Minor

Sharon Babcock, **Coordinator**

Phone: (540) 568-6652

Email: babcocsk@jmu.edu

Declaring Pre-Dentistry (Admission Standards)

Incoming first year and transfer students can declare pre-dentistry without verification from PPH Advising. Current students can request to declare the pre-dentistry minor through MyMadison but will need approval for the request to be granted. If the student has completed fewer than 13 hours of biology, chemistry, physics and math (BCPM) credits, the request will be granted after verification of course work. If the student has completed 13 hours or more BCPM credits, the request will be granted if the BCPM GPA is 2.90 or greater.

Access to Pre-Dentistry Advising (Progression Standards)

Once students have completed 13 hours of biology, chemistry, physics and math (BCPM) coursework, they become subject to twice yearly review of their academic progress. Performance queries will be conducted after summer and fall semester grades are posted. If the review indicates successful progress (meeting the standard of a 2.90 BCPM GPA), they will be invited to formal advising activities. Topics include learning about different dental programs and discussing fulfillment of non-academic requirements and recommendations (shadowing, volunteering, research, leadership). Assuming continued progress, students planning for the applicant stage (typically spring of the junior or senior year) are invited to participate in application planning seminars.

Pre-dentistry students who fall below the standards of a 2.90 BCPM GPA are at high risk of not being admitted to a dental school. Targeted advising for these students focuses on strengthening academic skills as well as career exploration. If a student falls below the standards in a subsequent performance

review, they will be administratively dropped from the pre-dentistry minor. This action will not impede a student from applying to dental schools, nor will it have an impact on a student's degree program as the pre-dentistry program is not a major.

Students who wish to re-enter the pre-dentistry minor may do so as long as they meet the GPA standards (2.90 BCPM GPA).

Additional Information

Pre-professional health programs do not ensure that all prerequisites for admission to health professions schools are met. Students should inquire with dental schools of interest to confirm details of admission requirements.

Courses: 35 Credit Hours

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00** and

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

BIO 150. Foundations of Biology II **Credits: 3.00** and

BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

CHEM 132. General Chemistry II **Credits: 3.00**

CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

CHEM 241. Organic Chemistry I **Credits: 3.00**

CHEM 242. Organic Chemistry II **Credits: 3.00**

CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**

CHEM 361. Biochemistry I **Credits: 3.00**

PHYS 140. College Physics I [C3PP] **Credits: 3.00**

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**

PHYS 150. College Physics II **Credits: 3.00**

PHYS 150L. General Physics Laboratory **Credits: 1.00**

Intermediate and advanced BIO coursework: 16 Credit Hours

Choose from subjects recommended by dental schools:

BIO 240. Genetics **Credits: 3.00** and

BIO 240L. Genetics Laboratory **Credits: 1.00**

BIO 245. General Microbiology **Credits: 3.00** and

BIO 245L. General Microbiology Laboratory **Credits: 1.00**

BIO 290. Human Anatomy **Credits: 3.00** and

BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

BIO 304. Cell and Molecular Biology **Credits: 3.00**¹

BIO 370. Animal Physiology **Credits: 4.00**¹

BIO 482. Human Histology **Credits: 4.00**²

Writing and Literature: 6 Credit Hours

WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**

One literature course from [C2L] ENG or HUM **Credits: 3.00**

Credits / Units: 3.00

Mathematics: 6 Credit Hours

Recommend one course in statistics and one course in calculus

Behavioral (PSYC) or social science (SOCI): 3 Credit Hours

Footnotes

¹ BIO 240/BIO 240L is a prerequisite.

² BIO 290/BIO 290L or BIO 370 is a prerequisite.

Total: 66 Credit Hours

Pre-Medicine Minor

Katie Fisher and Sharon Babcock, **Co-coordinators**

Phone: (540) 568-6652

Email: pph@jmu.edu

Declaring Pre-Medicine (Admission Standards)

Incoming first year and transfer students can declare pre-medicine without verification from PPH Advising. Current students can request to declare the pre-medicine minor through MyMadison but will need approval for the request to be granted. If the student has completed fewer than 13 hours of biology, chemistry, physics and math (BCPM) credits, the request will be granted after verification of course work. If the student has completed 13 hours or more BCPM credits, the request will be granted if the BCPM GPA is 3.00 or greater.

Access to Pre-Medicine Advising (Progression Standards)

Once students have completed 13 hours of biology, chemistry, physics and math (BCPM) coursework, they become subject to twice yearly review of their academic progress. Performance queries will be conducted after summer and fall semester grades are posted. If the review indicates successful progress (meeting the standards of a 3.00 BCPM GPA), they will be invited to formal advising activities. Topics include learning about different medical schools and discussing fulfillment of non-academic requirements and recommendations (shadowing, volunteering, research, leadership). Assuming continued progress, students planning for the applicant stage (typically spring of the junior or senior year) are invited to participate in application planning seminars.

Pre-medicine students who fall below the standards of a 3.00 BCPM GPA are at high risk of not being admitted to medical school. Targeted advising for these students focuses on strengthening academic skills as well as career exploration. If a student falls below the standards in a subsequent performance review, they will be administratively dropped from the pre-medicine minor. This action will not impede a student from applying to medical school, nor will it have an impact on a student's degree program as the pre-medicine program is not a major.

Students who wish to re-enter the pre-medicine minor may do so as long as they meet the GPA standards (3.00 BCPM GPA).

Additional Information

Pre-professional health programs do not ensure that all prerequisites for admission to health professions schools are met. Students should inquire with medical schools of interest to confirm details of admission requirements.

Courses: 35 Credit Hours

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
BIO 150. Foundations of Biology II **Credits: 3.00 and**
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**
CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

CHEM 132. General Chemistry II **Credits: 3.00**
CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

CHEM 241. Organic Chemistry I **Credits: 3.00**

CHEM 242. Organic Chemistry II **Credits: 3.00**
CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**

CHEM 361. Biochemistry I **Credits: 3.00**

PHYS 140. College Physics I [C3PP] **Credits: 3.00**
PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**

PHYS 150. College Physics II **Credits: 3.00**
PHYS 150L. General Physics Laboratory **Credits: 1.00**

Intermediate and advanced BIO course work: 12 Credit Hours

Choose from subjects recommended by medical schools and associated with foundational concepts on the MCAT:

BIO 240. Genetics **Credits: 3.00 and**
BIO 240L. Genetics Laboratory **Credits: 1.00**
BIO 245. General Microbiology **Credits: 3.00 and**
BIO 245L. General Microbiology Laboratory **Credits: 1.00**
BIO 304. Cell and Molecular Biology **Credits: 3.00**¹
BIO 370. Animal Physiology **Credits: 4.00**¹

Writing and Literature: 6 Credit Hours

WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**
One literature course from [C2L] ENG or HUM **Credits: 3.00**

Calculus: 3-4 Credit Hours

Choose from:
MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**
MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**
MATH 233. Calculus with Modeling I [C3QR] **Credits: 3.00**
MATH 235. Calculus I [C3QR] **Credits: 4.00**

Statistics: 3 Credit Hours

Choose from:
MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**
MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**

Behavioral (PSYC) and Social Sciences (SOCI/ANTH): 9 Credit Hours

Three credits must be in PSYC, three credits must be in SOCI and the remaining three credits of your choice.

PSYC 101. General Psychology [C5SD] **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

PSYC 308. Health Psychology **Credits: 3.00**

SOCI 110. Social Issues in a Global Context [C4GE] **Credits: 3.00**

SOCI 140. Microsociology: The Individual in Society [C5SD] **Credits: 3.00**

SOCI 375. Medical Sociology **Credits: 3.00**

SOCI 385. Madness and Society: The Sociology of Mental Health and Illness **Credits: 3.00**

ANTH 360. Medical Anthropology **Credits: 3.00**

Recommended elective (not required):

PHIL 120. Critical Thinking [C1CT] **Credits: 3.00**

Footnote

¹ BIO 240/BIO 240L is a prerequisite.

Total: 68-69 Credit Hours

Pre-Occupational Therapy Minor

Phone: (540) 568-6652

Email: pph@jmu.edu

Declaring Pre-Occupational Therapy (Admission Standards)

Incoming freshmen and transfer students can declare pre-OT without verification from PPH Advising. Current students can request declaration of the pre-OT minor (through MyMadison) but will need approval for the request to be granted. If the student has completed fewer than nine hours of the prerequisite courses included in the minor the request will be granted after verification of course work. If the student has completed nine hours or more of the prerequisite courses, the request will be granted only with a minimum GPA of 2.8.

Access to Pre-Occupational Therapy Advising (Progression Standards)

Once students have completed nine hours of the prerequisite courses, they become subject to twice yearly review of their academic progress. Performance queries will be conducted after summer and fall semester grades are posted. If the review indicates successful progress (meeting the standard of a minimum prerequisite GPA of 2.8), they will be invited to formal advising activities. Topics include learning about different OT programs, deciding where to apply and discussing fulfillment of non-academic requirements and recommendations (shadowing, volunteering). Assuming continued progress, students will reach the applicant stage (typically spring of the junior year), during which they will be invited to participate in application-related activities.

Pre-OT students who fall below the standard of a minimum prerequisite GPA of 2.8 are at high risk of not being admitted to an OT program. Targeted advising for these students focuses on improving/developing academic skills as well as career exploration. If students fall below the standard in a subsequent performance review, they will be administratively dropped from the pre-OT minor. This action will not impede a student from applying to OT programs, nor will it have any impact on a student's degree program as the pre-OT designation is not a major.

Students who wish to re-enter the pre-OT minor may do so as long as they meet the GPA standard (minimum prerequisite GPA of 2.8).

Additional Information

Pre-professional health programs do not ensure that all prerequisites for admission to health professions schools are met. Students should inquire with occupational therapy schools of interest, including JMU, to confirm details of admission requirements.

Courses: 23 Credit Hours

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**

BIO 270. Human Physiology [C3NS] **Credits: 3.00 and**

BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**

BIO 290. Human Anatomy **Credits: 3.00 and**

BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

HTH 210. Medical Terminology **Credits: 3.00**

PSYC 101. General Psychology [C5SD] **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

PSYC 250. Introduction to Abnormal Psychology **Credits: 3.00**¹

Footnote

¹ Psychology majors may take PSYC 335 in place of PSYC 250.

Chemistry: 3-4 Credit Hours

CHEM 120. Concepts of Chemistry [C3PP] **Credits: 3.00**

or

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**

and

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

Biomechanics: 4 Credit Hours

Choose from:

PHYS 140. College Physics I [C3PP] **Credits: 3.00**

and

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**

or

KIN 306. Human Biomechanics **Credits: 3.00**

and

KIN 306L. Human Biomechanics Laboratory **Credits: 1.00**

Social science: 3 Credit Hours

Choose from:

SOCI 110. Social Issues in a Global Context [C4GE] **Credits: 3.00**
SOCI 140. Microsociology: The Individual in Society [C5SD] **Credits: 3.00**

Statistics: 3 Credit Hours

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

Recommended electives (not required):

Social Science: 3 Credit Hours (not required)

Any SOCI or ANTH course at the 200 level or above.

Introductory biology: 3-4 Credit Hours (not required)

BIO 103. Contemporary Biology [C3NS] **Credits: 3.00**
or
BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

Ethics: 1-3 Credit Hours (not required)

HTH 423. Ethics and Critical Thinking in Health **Credits: 3.00**
IPE 415. Ethical Decision-Making in Healthcare: an Interprofessional Approach **Credits: 1.00**
NSG 415. Ethical Decision-Making in Healthcare: an Interprofessional Approach **Credits: 1.00**
PHIL 150. Ethical Reasoning [C1CT] **Credits: 3.00**

Total: 36-37 Credit Hours

Pre-Optometry Minor

Jeff Andre, **Coordinator**
Phone: (540) 568-6652
Email: andrejt@jmu.edu

Declaring Pre-Optometry (Admission Standards)

Incoming first-year and transfer students can declare pre-optometry without verification from PPH Advising. Current students can declare the pre-optometry minor through MyMadison without needing further approval.

Additional Information

Pre-professional health programs do not ensure that all prerequisites for admission to health professions schools are met. Students should inquire with optometry schools of interest to confirm details of admission requirements.

Courses: 50 Credit Hours

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**
BIO 150. Foundations of Biology II **Credits: 3.00 and**
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**
BIO 245. General Microbiology **Credits: 3.00 and**
BIO 245L. General Microbiology Laboratory **Credits: 1.00**
BIO 270. Human Physiology [C3NS] **Credits: 3.00 and**

BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**
BIO 290. Human Anatomy **Credits: 3.00 and**
BIO 290L. Human Anatomy Laboratory **Credits: 1.00**
CHEM 131. General Chemistry I [C3PP] **Credits: 3.00 and**
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**
CHEM 132. General Chemistry II **Credits: 3.00 and**
CHEM 132L. General Chemistry Laboratory **Credits: 1.00**
CHEM 241. Organic Chemistry I **Credits: 3.00**
CHEM 242. Organic Chemistry II **Credits: 3.00 and**
CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**
CHEM 361. Biochemistry I **Credits: 3.00**
PHYS 140. College Physics I [C3PP] **Credits: 3.00 and**
PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**
PHYS 150. College Physics II **Credits: 3.00 and**
PHYS 150L. General Physics Laboratory **Credits: 1.00**
PSYC 101. General Psychology [C5SD] **Credits: 3.00**

Intermediate or advanced BIO coursework: 4 Credit Hours

Choose from subjects recommended by optometry schools:

BIO 240. Genetics **Credits: 3.00 and**
BIO 240L. Genetics Laboratory **Credits: 1.00**
BIO 304. Cell and Molecular Biology **Credits: 3.00**¹
BIO 343. Immunology **Credits: 3.00**¹
BIO 482. Human Histology **Credits: 4.00**

Calculus: 3-4 Credit Hours

Choose from:

MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**
MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**
MATH 233. Calculus with Modeling I [C3QR] **Credits: 3.00**
MATH 235. Calculus I [C3QR] **Credits: 4.00**

Statistics: 3 Credit Hours

Choose from:

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**
MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**

Writing and Literature: 6 Credit Hours

WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**
One literature course from [C2L] ENG or HUM **Credits: 3.00**

Footnote

¹BIO 240 is a prerequisite.

Total: 66-67 Credit Hours

Pre-Pharmacy Minor

Mary Hildebrand, **Coordinator**

Phone: (540) 568-6652

Email: pph@jmu.edu

Declaring Pre-Pharmacy (Admission Standards)

Incoming first year and transfer students can declare pre-pharmacy without verification from PPH Advising. Current students can request to declare the pre-pharmacy minor through MyMadison but will need approval for the request to be granted. If the student has completed fewer than 10 hours of foundational courses in the pre-pharmacy minor, the request will be granted after verification of course work. If the student has completed 10 or more hours of foundational courses, the request will be granted if the biology, chemistry and physics (BCP) GPA is 2.50 or greater.

Access to Pre-Pharmacy Advising (Progression Standards)

Once students have completed 10 hours of foundational BCP course work, they become subject to twice yearly review of their academic progress. Performance queries will be conducted after summer and fall semester grades are posted. If the review indicates successful progress (meeting the standard of a 2.50 BCP GPA), they will be invited to participate in formal advising activities. Topics include learning about different pharmacy schools, strategies for fulfilling non-academic requirements and recommendations (shadowing, volunteering, research and pharmacy tech certification).

Pre-pharmacy students who fall below the standard of a 2.50 BCP science GPA are at high risk of not being admitted to a pharmacy school. Targeted advising for these students focuses on strengthening academic skills as well as career exploration. If a student falls below the standard in a subsequent performance review, they will be administratively dropped from the pre-pharmacy minor. This action will not impede a student from applying to pharmacy schools, nor will it have an impact on a student's degree program as the pre-pharmacy program is not a major.

Students who wish to re-enter the pre-pharmacy minor may do so as long as they meet the BCP GPA standard (2.50 BCP science GPA).

Additional Information

Pre-professional health programs do not ensure that all prerequisites for admission to health professions schools are met. Students should inquire with pharmacy schools of interest to confirm details of admission requirement.

Courses: 43 Credit Hours

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00**¹ and

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**¹

BIO 150. Foundations of Biology II **Credits: 3.00** and

BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

BIO 245. General Microbiology **Credits: 3.00**¹ and

BIO 245L. General Microbiology Laboratory **Credits: 1.00**¹

BIO 270. Human Physiology [C3NS] **Credits: 3.00**¹ and

BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**¹

BIO 290. Human Anatomy **Credits: 3.00** and

BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00**¹ and

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**¹

CHEM 132. General Chemistry II **Credits: 3.00**¹ and

CHEM 132L. General Chemistry Laboratory **Credits: 1.00**¹

CHEM 241. Organic Chemistry I **Credits: 3.00**

CHEM 242. Organic Chemistry II **Credits: 3.00** and

CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**

CHEM 361. Biochemistry I **Credits: 3.00**

PHYS 140. College Physics I [C3PP] **Credits: 3.00**¹ and

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**¹

Intermediate or advanced BIO coursework: 4 Credit Hours

Choose from subjects recommended by pharmacy schools:

BIO 240. Genetics **Credits: 3.00** and

BIO 240L. Genetics Laboratory **Credits: 1.00**

BIO 304. Cell and Molecular Biology **Credits: 3.00**²

BIO 343. Immunology **Credits: 3.00**²

BIO 480. Advanced Molecular Biology **Credits: 3.00**²

Calculus: 3-4 Credit Hours

Choose from:

MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**¹

MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**¹

MATH 233. Calculus with Modeling I [C3QR] **Credits: 3.00**¹

MATH 235. Calculus I [C3QR] **Credits: 4.00**¹

Statistics: 3 Credit Hours

Choose from:

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**¹

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**¹

Public speaking: 3 Credit Hours

Choose from:

SCOM 121. Fundamental Human Communication: Presentations [C1HC] **Credits: 3.00**

SCOM 122. Fundamental Human Communication: Individual Presentations [C1HC]

Credits: 3.00

SCOM 123. Fundamental Human Communication: Group Presentations [C1HC] **Credits: 3.00**

Writing and Literature: 6 Credit Hours

WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**

One literature course from [C2L] ENG or HUM **Credits: 3.00**

Behavioral science: 3 Credit Hours

Choose from:

PSYC 101. General Psychology [C5SD] **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

Social science: 3 Credit Hours

Choose from:

SOCI 110. Social Issues in a Global Context [C4GE] **Credits: 3.00**
SOCI 140. Microsociology: The Individual in Society [C5SD] **Credits: 3.00**

Economics: 3 Credit Hours

Choose from:

ECON 201. Introduction to Microeconomics **Credits: 3.00**
ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**

Recommended electives (not required):

CHEM 366L. Biochemistry Laboratory **Credits: 2.00**
PHYS 150. College Physics II **Credits: 3.00 and**
PHYS 150L. General Physics Laboratory **Credits: 1.00**

Footnotes

¹ Foundational course for minor.

² BIO 240 is a prerequisite.

Total: 71-72 Credit Hours

Pre-Physical Therapy Minor

Phone: (540) 568-6652

Email: pph@jmu.edu

Declaring Pre-Physical Therapy (Admission Standards)

Incoming freshmen and transfer students can declare pre-PT without verification from PPH Advising. Current students can request declaration of the pre-PT minor (through MyMadison) but will need approval for the request to be granted. If the student has completed fewer than 10 hours of the prerequisite credits, the request will be granted after verification of course work. If the student has completed 10 hours or more of the prerequisite credits, the request will be granted only if the prerequisite GPA is 2.7 or greater.

Access to Pre-Physical Therapy Advising (Progression Standards)

Once students have completed 10 hours of the prerequisite course list, they become subject to twice yearly review of their academic progress. Performance queries will be conducted after summer and fall semester grades are posted. If the review indicates successful progress (meeting the standard of a 2.7 prerequisite GPA), they will be invited to formal advising activities. Topics include learning about different PT programs, deciding where to apply and discussing fulfillment of non-academic requirements and recommendations (shadowing, volunteering). Assuming continued progress, students will reach the applicant stage (typically spring of the junior year) during which they will be invited to participate in application related activities.

Pre-PT students who fall below the standard of a 2.7 prerequisite GPA are at high risk of not being admitted to a PT program. Targeted advising for these students focuses on improving/developing academic skills as well as career exploration. If students fall below the standard in a subsequent performance

review, they will be administratively dropped from the pre-PT minor. This action will not impede a student from applying to PT programs, nor will it have any impact on a student's degree program as the pre-PT designation is not a major.

Students who wish to re-enter the pre-PT minor may do so as long as they meet the GPA standard (2.7 prerequisite GPA).

Additional Information

Pre-professional health programs do not ensure that all prerequisites for admission to health professions schools are met. Students should inquire with physical therapy schools of interest to confirm details of admission requirements

Courses: 35 Credit Hours

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 ¹ and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00 ¹**
BIO 150. Foundations of Biology II **Credits: 3.00 and**
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**
BIO 270. Human Physiology [C3NS] **Credits: 3.00 ¹ and**
BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00 ¹**
BIO 290. Human Anatomy **Credits: 3.00 ¹ and**
BIO 290L. Human Anatomy Laboratory **Credits: 1.00 ¹**
CHEM 131. General Chemistry I [C3PP] **Credits: 3.00 ¹**
CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00 ¹**
CHEM 132. General Chemistry II **Credits: 3.00 ¹**
CHEM 132L. General Chemistry Laboratory **Credits: 1.00 ¹**
MATH 220. Elementary Statistics [C3QR] **Credits: 3.00 ¹**
PHYS 140. College Physics I [C3PP] **Credits: 3.00 ¹ and**
PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00 ¹**
PHYS 150. College Physics II **Credits: 3.00 ¹ and**
PHYS 150L. General Physics Laboratory **Credits: 1.00 ¹**

Behavioral science: 6 Credit Hours

Complete at least two of the following:

PSYC 101. General Psychology [C5SD] **Credits: 3.00 ²**
PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00 ²**
PSYC 250. Introduction to Abnormal Psychology **Credits: 3.00 ²**

Required elective: 3-4 credit hours

Complete at least one of the following:

HTH 210. Medical Terminology **Credits: 3.00**

KIN 302. Exercise Physiology **Credits: 3.00 and**
KIN 302L. Exercise Physiology Laboratory **Credits: 1.00**

Writing and Literature: 6 Credit Hours

WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**
One literature course from [C2L] ENG or HUM **Credits: 3.00**

Recommended Electives (not required):

Biomechanics: 4 Credit Hours (not required)

BIO 490. Mechanics of Animal Movement **Credits: 4.00**

KIN 306. Human Biomechanics **Credits: 3.00 and**

KIN 306L. Human Biomechanics Laboratory **Credits: 1.00**

Calculus: 3-4 Credit Hours (not required)

Choose from:

MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**

MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**

MATH 233. Calculus with Modeling I [C3QR] **Credits: 3.00**

MATH 235. Calculus I [C3QR] **Credits: 4.00**

Footnotes

¹ Course grade used for progression standards.

² Course grade in one PSYC course used for progression standards.

Total: 50-51 Credit Hours

Pre-Physician Assistant Minor

Katie Fisher, **Coordinator**

Phone: (540) 568-6652

Email: fishermk@jmu.edu

Declaring Pre-Physician Assistant (Admission Standards)

Incoming first-year and transfer students can declare pre-physician assistant without verification from PPH Advising. Current students can request to declare the minor through MyMadison but will need approval for the request to be granted. If the student has completed fewer than 12 hours of biology and chemistry (BC) credits, the request will be granted after verification of course work. If the student has completed 12 hours or more BC credits, the request will be granted if the BC GPA is 2.70 or greater.

Access to Pre-Physician Assistant Advising (Progression Standards)

Once students have completed 12 hours of biology or chemistry (BC) coursework, they become subject to twice yearly review of their academic progress. Performance queries will be conducted after summer and fall semester grades are posted. If the review indicates successful progress (meeting the standard of a 2.70 BC GPA), they will be invited to formal advising activities. Topics include learning about different physician assistant programs and discussing fulfillment of non-academic requirements and recommendations (shadowing, volunteering, research and leadership). Assuming continued progress, students planning for the applicant stage (typically spring of the junior or senior year) are invited to participate in application planning seminars.

Pre-physician assistant students who fall below the standard of a 2.70 BC GPA are at high risk of not being admitted to a physician assistant program. Targeted advising for these students focuses on strengthening

academic skills as well as career exploration. If a student falls below the standard in a subsequent performance review, they will be administratively dropped from the pre-physician assistant minor. This action will not impede a student from applying to physician assistant programs, nor will it have an impact on a student's degree program as the pre-physician assistant program is not a major.

Students who wish to re-enter the pre-physician assistant minor may do so as long as they meet the GPA standards (2.70 BC GPA).

Additional Information

Pre-professional health programs do not ensure that all prerequisites for admission to health professions schools are met. Students should inquire with physician assistant schools of interest, including JMU, to confirm details of admission requirements.

Courses: 35 Credit Hours

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

BIO 150. Foundations of Biology II **Credits: 3.00 and**

BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

BIO 245. General Microbiology **Credits: 3.00 and**

BIO 245L. General Microbiology Laboratory **Credits: 1.00**

BIO 270. Human Physiology [C3NS] **Credits: 3.00 and**

BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**

BIO 290. Human Anatomy **Credits: 3.00 and**

BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00 and**

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

CHEM 132. General Chemistry II **Credits: 3.00 and**

CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

CHEM 241. Organic Chemistry I **Credits: 3.00 and**

CHEM 241L. Concepts of Organic Chemistry Laboratory **Credits: 1.00**¹

HTH 210. Medical Terminology **Credits: 3.00**

Biochemistry: 3-4 Credit Hours

Choose from:

CHEM 260. Concepts of Biochemistry **Credits: 3.00 and**

CHEM 260L. Concepts of Biochemistry Laboratory **Credits: 1.00**

or

CHEM 361. Biochemistry I **Credits: 3.00**

Intermediate or advanced BIO course work: 4 Credit Hours

Choose from subjects recommended by physician assistant programs:

BIO 240. Genetics **Credits: 3.00 and**

BIO 240L. Genetics Laboratory **Credits: 1.00**

BIO 304. Cell and Molecular Biology **Credits: 3.00**²

BIO 343. Immunology **Credits: 3.00**²

BIO 482. Human Histology **Credits: 4.00**

Behavioral science (PSYC): 6 Credit Hours

Recommend choosing from:

PSYC 101. General Psychology [C5SD] **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

PSYC 250. Introduction to Abnormal Psychology **Credits: 3.00**

Statistics: 3 Credit Hours

Choose from:

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**

Recommended electives (not required):

MATH course **Credits: 3.00**

Footnotes

¹CHEM 242L may be substituted for CHEM 241L. The CHEM 242L corequisite is CHEM 242.

²BIO 240 is a prerequisite.

Total: 51-52 Credit Hours

Pre-Veterinary Medicine Minor

Katie Fisher, **Coordinator**

Phone: (540) 568-6652

Email: fishermk@jmu.edu

Declaring Pre-Veterinary Medicine (Admission Standards)

Incoming freshmen and transfer students can declare pre-veterinary medicine without verification from PPH Advising. Current students can declare the pre-veterinary medicine minor through MyMadison without needing further approval.

Additional Information

Pre-professional health programs do not ensure that all prerequisites for admission to health professions schools are met. Students should inquire with veterinary schools of interest to confirm details of admission requirements

Courses: 43 Credit Hours

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

BIO 150. Foundations of Biology II **Credits: 3.00 and**

BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

BIO 240. Genetics **Credits: 3.00 and**

BIO 240L. Genetics Laboratory **Credits: 1.00**

BIO 245. General Microbiology **Credits: 3.00 and**

BIO 245L. General Microbiology Laboratory **Credits: 1.00**

CHEM 131. General Chemistry I [C3PP] **Credits: 3.00 and**

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00**

CHEM 132. General Chemistry II **Credits: 3.00 and**

CHEM 132L. General Chemistry Laboratory **Credits: 1.00**

CHEM 241. Organic Chemistry I **Credits: 3.00**

CHEM 242. Organic Chemistry II **Credits: 3.00 and**

CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**

CHEM 361. Biochemistry I **Credits: 3.00**

PHYS 140. College Physics I [C3PP] **Credits: 3.00 and**

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**

PHYS 150. College Physics II **Credits: 3.00 and**

PHYS 150L. General Physics Laboratory **Credits: 1.00**

Intermediate and advanced BIO course work: 13 Credit Hours

Choose from subjects recommended by veterinary schools:

BIO 304. Cell and Molecular Biology **Credits: 3.00**

BIO 320. Comparative Anatomy of Vertebrates **Credits: 4.00**

BIO 343. Immunology **Credits: 3.00**

BIO 370. Animal Physiology **Credits: 4.00**

BIO 420. Medical Parasitology **Credits: 3.00**

BIO 480. Advanced Molecular Biology **Credits: 3.00**

BIO 482. Human Histology **Credits: 4.00**

Calculus: 3-4 Credit Hours

Choose from:

MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**

MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**

MATH 233. Calculus with Modeling I [C3QR] **Credits: 3.00**

MATH 235. Calculus I [C3QR] **Credits: 4.00**

Statistics: 3 Credit Hours

Choose from:

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**

Writing and Literature: 6 Credit Hours

WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**

One literature course from [C2L] ENG or HUM **Credits: 3.00**

Public Speaking: 3 Credit Hours

Choose from:

SCOM 121. Fundamental Human Communication: Presentations [C1HC] **Credits: 3.00**

SCOM 122. Fundamental Human Communication: Individual Presentations [C1HC] **Credits: 3.00**

SCOM 123. Fundamental Human Communication: Group Presentations [C1HC] **Credits: 3.00**

Recommended electives (not required):

BIO 312. Animal Welfare **Credits: 3.00**

CHEM 366L. Biochemistry Laboratory **Credits: 2.00**

HTH 210. Medical Terminology **Credits: 3.00**

Total: 71-72 Credit hours

Pre-Forensic Studies Advisory Program

Forensic scientists apply the knowledge and techniques of science to the purposes of law. Forensic studies incorporate a wide array of disciplines and can be vital to enforcing criminal laws and government regulations, settling civil disputes, and to protecting public health. Preparation guidelines are outlined for three common areas of graduate study in forensic studies:

Forensic Biology

A biology or chemistry major is recommended with the following:

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

BIO 150. Foundations of Biology II **Credits: 3.00 and**

BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

BIO 240. Genetics **Credits: 3.00 and**

BIO 240L. Genetics Laboratory **Credits: 1.00**

BIO 324. Human Genetics **Credits: 3.00**

BIO 343. Immunology **Credits: 3.00**

BIO 361. Biochemistry I **Credits: 3.00**

or

CHEM 361. Biochemistry I **Credits: 3.00**

CRJU 215. Introduction to Criminal Justice **Credits: 3.00**

Forensic Chemistry

A biology or chemistry major is recommended with the following:

CHEM 375. An Introduction to Materials Science **Credits: 3.00**

or

MATS 375. An Introduction to Materials Science **Credits: 3.00**

or

PHYS 375. An Introduction to Materials Science **Credits: 3.00**

CHEM 331. Physical Chemistry I **Credits: 3.00**

CHEM 351. Analytical Chemistry **Credits: 4.00**

CHEM 361. Biochemistry I **Credits: 3.00**

or

BIO 361. Biochemistry I **Credits: 3.00**

CRJU 215. Introduction to Criminal Justice **Credits: 3.00**

Forensic Anthropology

An anthropology (biological anthropology concentration) or biology major is recommended with the following:

BIO 270. Human Physiology [C3NS] **Credits: 3.00 and**

BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**

or

BIO 370. Animal Physiology **Credits: 4.00**

BIO 290. Human Anatomy **Credits: 3.00 and**

BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

BIO 426. Topics in Biology **Credits: 1.00 - 4.00** (when topic is Forensic Anatomy)

or

ANTH 395. Special Topics in Anthropology **Credits: 3.00** (when topic is Forensic Anatomy)

Choose two of the following: 6 Credit Hours

MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**

MATH 324. Applied Nonparametric Statistics **Credits: 3.00**

MATH 421. Applied Multivariate Statistical Analysis **Credits: 3.00**

Additional Information

Students are encouraged to take advanced course work in BIO 410. Advanced Human Anatomy and ANTH 319. Human Osteology.

General Education: The Human Community

Margaret M. Mulrooney, **Senior Associate Vice Provost for Academic Programs and Equity**

Mission Statement

In the liberal arts tradition, General Education: The Human Community aspires to create informed global citizens of the 21st century.

James Madison University's General Education program is committed to creating an equitable and inclusive academic environment for all persons. We affirm that equity advances understanding and is integral to a liberal arts education. We acknowledge the history of exclusion and inequity nationally and at James Madison University. We embrace the process of making JMU's General Education program accessible, affirming, and action-oriented.

By placing inclusion and equity at the center of our mission, we seek to implement strategies and diversity policies that reimagine the relevance of a liberal arts education. We challenge our community of students, faculty, and staff to engage in personal and collective reflection, development, and action.

Philosophy

General Education: The Human Community is the core academic program of James Madison University in which students come to understand how distinct disciplines look at the world from different vantage points. Courses in The Human Community are organized into five areas, each emphasizing unique tools, rationales and methodologies. Taken together, courses in a student's chosen major and The Human Community complement and complete each other. Both are integral and essential components of a student's full and proper education.

Goals

Students understand the historical and contemporary distinctions and interconnections among people, institutions, and communities that create, preserve and transmit culture and knowledge in the arts, sciences, mathematics, social sciences and humanities.

Students become skilled in questioning, investigating, analyzing, evaluating and communicating.

Students participate in a variety of aesthetic and civic experiences reflecting human concerns and values that transcend the limits of specialization.

Organization and Learning Outcomes

The Human Community is a coherent, learning outcomes-based academic program. These outcomes are met by completing 14 requirements organized in five areas.

Area Credit Hours

American and Global Perspectives (*formerly Cluster Four: Social and Cultural Processes*) 7 Credit Hours

Arts and Humanities (*formerly Cluster Two: Arts and Humanities*) 9 Credit Hours

Madison Foundations (*formerly Cluster One: Skills for the 21st Century*) 9 Credit Hours

Sociocultural and Wellness Area (*formerly Cluster Five: Individuals in the Human Community*) 6 Credit Hours

The Natural World (*formerly Cluster Three: The Natural World*) 10 Credit Hours

Total: 41 Credit Hours

American and Global Perspectives (formerly: Cluster Four: Social and Cultural Processes)

Courses in American and Global Perspectives require students to think critically about their own society and its relationship to the larger global community. These courses develop responsible and enlightened global citizenship by examining a wide variety of the processes that shape the human experience. Students will complete one course that focuses on the American experience and one course that examines the global experience.

American and Global Perspectives Learning Outcomes

The American Experience

After completing an **American Experience** course students will be able to identify, conceptualize and evaluate:

- Social and political processes and structures using quantitative and qualitative data.
- Primary sources relating to American history, political institutions and society.
- The evolution of intellectual concepts shaping American democratic institutions, including issues involving power, inequity and justice.
- The complexity and diversity of American politics, society and culture.
- Intentions and consequences of America's engagement in global affairs.
- How the historical exclusion of various social identities influences political, social, cultural and economic development.

The Global Experience

After completing a **Global Experience** course students will be able to identify, conceptualize and evaluate:

- Basic global problems.
- Global political, social, cultural and economic systems that shape societies.
- Issues involved in analyzing societies different from one's own.
- Strategies to achieve diversity, equity, inclusion, justice and access both locally and globally.
- The value and complexity of global diversity in all its forms.

American and Global Perspective Structure

American and Global Perspectives consists of seven credits distributed across two program requirements: **The American Experience** and **The Global Experience**. Students will choose one course to satisfy each of these two requirements. **American and Global Perspectives** requirements may be completed concurrently or individually, in any order. Students may not take both POSC 200 and POSC 225 to complete the **American and Global Perspectives** requirements.

The American Experience

Each American Experience course provides students with an understanding of the major themes and concepts that structure American life today. HIST 225 does so through a contextual and document-based study of the American historical experience that emphasizes the interaction of people, ideas and social movements. JUST 225 frames questions regarding historic and contemporary events in terms of issues of justice, highlighting how societal structures interact with individual lives and vice versa. POSC 225 focuses on the evolution and contemporary operation of the American political system by examining its fundamental principles and current dynamics.

Choose one of the following:

HIST 225. U.S. History [C4AE] **Credits: 4.00**

JUST 225. Justice and American Society [C4AE] **Credits: 4.00**

POSC 225. U.S. Government [C4AE] **Credits: 4.00**

The Global Experience

Each of the courses in the Global Experience is an investigation into a series of global issues that are of great importance to the human community. Topics discussed will vary from course to course. Issues are examined in a systemic

context that allows students to see connections between disciplines. The unifying theme is an analysis of overarching structures at the global level that condition people's behavior and which are shaped by that behavior. From this perspective the study of global issues requires more than studying current events; it involves placing these global issues in a systemic context.

Choose one of the following:

AAAD 200. Introduction to African, African American and Diaspora Studies [C4GE]

Credits: 3.00

ANTH 195. Cultural Anthropology [C4GE] **Credits:** 3.00

ECON 200. Introduction to Macroeconomics [C4GE] **Credits:** 3.00

GEOG 200. Geography: The Global Dimension [C4GE] **Credits:** 3.00

POSC 200. Global Politics [C4GE] **Credits:** 3.00

SOCI 110. Social Issues in a Global Context [C4GE] **Credits:** 3.00

Arts and Humanities (formerly Cluster Two: Arts and Humanities)

Dennis C. Beck, **Arts and Humanities Coordinator**

Arts and Humanities courses show students what it means to live lives enriched by reflection, imagination and creativity. They do so by offering each individual a cross-disciplinary experience within the arts and humanities, those areas of endeavor that humans have long valued for their intrinsic worth and that invite a deeper appreciation of the human experience. The broadly stated goals for **Arts and Humanities** are:

- To introduce students to cultural, historical, aesthetic and theoretical expressions of and questions about human experience.
- To expose students to multiple academic disciplines in the arts and humanities and their methods and unique perspectives.
- To inspire a deeper awareness of how the interplay between culture and expression affects both collective and individual identities.
- To foster appreciation of the aesthetic and formal qualities of literary, visual and performing arts.
- To engage students in thinking critically and communicating clearly about enduring questions concerning human life, culture and history.

Arts and Humanities Learning Outcomes

Human Questions and Contexts

After completing a **Human Questions and Contexts** course students will be able to:

- Use critical and comparative analysis to question their own and others' beliefs about and responses to the world or universe.
- Apply the methods of the discipline(s) studied to material from the humanities.
- Identify, evaluate and produce arguments using appropriate concepts and techniques and formulate logical arguments on the same basis.
- Demonstrate an understanding of broader cultural, historical or conceptual contexts of particular issues, ideas, objects or events – past and present.
- Experience humanities events (such as exhibits, films, performances or public lectures) more discerningly.

Visual and Performing Arts

After completing a **Visual and Performing Arts** course students will be able to:

- Explain how artistic works and culture are interrelated.
- Recognize that the arts are accessible and relevant to their lives.
- Demonstrate disciplinary literacy (vocabulary, concepts, creative processes) in a major art form.
- Produce an informed response to the form, content and aesthetic qualities of artistic works.
- Experience arts events more discerningly.
- Acknowledge relationships among the arts.

Literature

After completing a **Literature** course students will be able to:

- Generate increasingly nuanced questions (interpretations, ideas) about literature and explain why those questions matter.
- Use appropriate vocabulary and tactics to analyze specific literary expressions of culture and the relationship between the reader, the author and text.
- Define ways that texts serve as arguments and identify rhetorical and formal elements that inform these arguments.
- Recognize appropriate contexts (such as genres, political perspectives, textual juxtapositions) and understand that readers may interpret literature from a variety of perspectives.
- Articulate a variety of examples of the ways in which literature gives us access to the human experience that reveals what differentiates it from, and connects it to, the other disciplines that make up the arc of human learning.

Arts and Humanities Structure

Arts and Humanities consist of nine credits distributed across three program requirements: **Human Questions and Contexts**, **Visual and Performing Arts**, and **Literature**. Students will choose one course to satisfy each of these three requirements. **Arts and Humanities** requirements may be completed concurrently or individually, in any order.

Human Questions and Contexts

AMST 200 takes a cross-disciplinary approach to questions about American identity and shows how they reflect a complex interplay of cultural, historical, religious and ideological perspectives. The ANTH and HIST courses introduce students to the great cultures of the world by surveying the common patterns of experience that characterized Western, Middle Eastern, Asian, African, Meso- and South American societies in the past. The HUM courses are cross-disciplinary, in-depth explorations of specific topics, cultures, periods or themes. The PHIL and REL courses explore the great inquiries into human existence and the ways different cultures across different time periods constructed their responses to questions concerning humans' existence and their relationship to nature, ultimate reality and the universe. Thus all of the courses in **Human Questions and Contexts** emphasize central questions about the human condition and ways of studying values and beliefs as they are shaped by class, gender, race, historical events, philosophy and religion.

Choose one of the following:

AMST 200. Introduction to American Studies [C2HQC] **Credits: 3.00**

ANTH 205. Buried Cities, Lost Tribes: The Rise and Fall of Early Human Societies [C2HQC] **Credits: 3.00**

HIST 101. World History to 1500 [C2HQC] **Credits: 3.00**

HIST 102. World History Since 1500 [C2HQC] **Credits: 3.00**

HUM 250. Foundations of Western Culture [C2HQC] **Credits: 3.00** (Topics vary by section. Examples include: Ancient Greece, Rome)

HUM 251. Modern Perspectives [C2HQC] **Credits: 3.00** (Topics vary by section. Examples include: The 'Catalan Question': a Socio-cultural and Historical Approach, Creating a Culture of Tolerance in Islamic Spain, and Italian Society and Culture after WWII)

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (Topics vary by section. Examples include: Global South Asia, West Africa, Turkey: Meeting of East and West, Japanese Culture: Past and Present)

LAXC 252. Introduction to Latin American, Latinx and Caribbean Studies [C2HQC] **Credits: 3.00**

PHIL 101. Introduction to Philosophy [C2HQC] **Credits: 3.00**

REL 101. Religions of the World [C2HQC] **Credits: 3.00**

REL 102. Religion, Spirituality and the Meaning of Life [C2HQC] **Credits: 3.00**

Visual and Performing Arts

ARTH 205 and ARTH 206 are global art history surveys that introduce students to the visual arts, whose history often has been interconnected with developments in music, dance and theatre/film. These surveys are organized chronologically, but focus distinctly on artistic perception and experience. The global music surveys explore history and the arts through the study of music: its development, aesthetics, forms and styles; and its context within the cultural communities that produced it. ART 200 and MUS 200 are introductions to art or music in general culture; DANC 215 considers the historic and cultural significance of dance as well as the components of dance performance; THEA 210 studies theatre as an art form in its cultural contexts including acting, directing, design, costuming and lighting; MUS 203 explores America's music landscape and examines the interconnections among music, art and literature in historical periods.

Choose one of the following:

ART 200. Art in General Culture [C2VPA] **Credits: 3.00**

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA] **Credits: 3.00**

DANC 215. The Dance Experience [C2VPA] **Credits: 3.00**

MUS 200. Music and Culture [C2VPA] **Credits: 3.00**

MUS 203. Music in America [C2VPA] **Credits: 3.00**

MUS 206. Introduction to Global Music [C2VPA] **Credits: 3.00**

THEA 210. Introduction to Theatre [C2VPA] **Credits: 3.00**

Literature

The literature surveys provide students with extensive reading experiences of representative genres and authors and various critical approaches to literary texts, as well as opportunities to explore the complex ways that the literature both reflects and helps change or create the cultural and intellectual contexts of the times in which they are written. Students are expected to learn strategies for reading and interpreting any literary text so that they come to deepen their appreciation of the aesthetics, rhetorical strategies and meaning of a range of literary texts. Through the humanistic study of literature, students will also obtain a better understanding of themselves and their own culture as well as those of others.

Choose one of the following:

ENG 221. Literature/Culture/Ideas [C2L] **Credits: 3.00**

ENG 222. Genre(s) [C2L] **Credits: 3.00**

ENG 235. Survey of English Literature: From Beowulf to the Eighteenth Century [C2L] **Credits: 3.00**

ENG 236. Survey of English Literature: Eighteenth Century to Modern [C2L] **Credits: 3.00**

ENG 239. Studies in World Literature [C2L] **Credits: 3.00**

ENG 247. Survey of American Literature: From the Beginning to the Civil War [C2L] **Credits: 3.00**

ENG 248. Survey of American Literature: From the Civil War to the Modern Period [C2L] **Credits: 3.00**

ENG 260. Survey of African American Literature [C2L] **Credits: 3.00**

HUM 200. Great Works [C2L] **Credits: 3.00** (Topics vary by section. Examples include: *The American Century*, *Survey of Traditional and Modern Chinese Literature*, *Hip Hop Cultures*, *Utopia*, *Dystopias*)

Literature and Writing Infusion

The courses that satisfy the **Literature** requirement are designated as writing-infused. Students will write a minimum of 5,000 words (approximately 15 pages double-spaced in a standard font) in assignments that may include both informal and formal, ungraded and graded forms. The extensive opportunity to produce and receive feedback on various genres of academic writing will help students sharpen their responses to interesting and thought-provoking texts and promote more engaged and sophisticated reading strategies.

Madison Foundations (formerly Cluster One: Skills for the 21st Century)

Sarah T. Brooks, **Madison Foundations Coordinator**

Madison Foundations is the cornerstone of General Education: The Human Community at JMU, with course work requiring students to demonstrate:

- Critical thinking skills
- Effective oral presentation skills
- Effective writing skills
- Competency in information literacy

Students will be able to use reading, writing, human communication, critical thinking, and information literacy skills for inquiring, learning, thinking and communicating in their personal, academic and civic lives. Competence in these areas is fundamental to subsequent study in major and professional programs. Therefore, all students complete **Madison Foundations** requirements during their first academic year, including their first summer, at JMU.

Madison Foundations Learning Outcomes

After completing Madison Foundations, students should be able to use reading, writing, human communication, critical thinking and information literacy skills for inquiring, learning, thinking and communicating in their personal, academic and civic lives.

Critical Thinking

After completing a **Critical Thinking** course students will be able to:

- Identify the basic components of arguments, including premises, supporting evidences, assumptions, conclusions and implications;

- Evaluate claims and sources for clarity, credibility, reliability, accuracy and relevance;
- Evaluate arguments for soundness, strength and completeness;
- Demonstrate an intellectual disposition to be fair-minded in considering evidence, arguments and alternative points of view.

Human Communication

After completing a **Critical Thinking** course students will be able to:

- Explain the fundamental processes that significantly influence communication.
- Construct messages consistent with the diversity of communication purpose, audience, context and ethics.
- Respond to messages consistent with the diversity of communication purpose, audience, context and ethics.
- Utilize information literacy skills expected of ethical communicators.

Writing

After completing a **Human Communication** course students will be able to:

- Demonstrate an awareness of rhetorical knowledge, which may include the ability to analyze and act on understandings of audiences, purposes and contexts in creating and comprehending texts.
- Employ critical thinking, which includes the ability through reading, research and writing, to analyze a situation or text and make thoughtful decisions based on that analysis.
- Employ writing processes.
- Demonstrate an awareness of conventions, the formal and informal guidelines that define what is considered to be correct and appropriate in a variety of texts.
- Compose in multiple environments using traditional and digital communication tools.

Information Literacy

Information Literacy is developed in all courses within **Madison Foundations**. Additionally, the **Human Communication** courses incorporate targeted learning modules with graded quizzes. After this broad, holistic curricular development of research skills and information literacy, students will be able to:

- Recognize the components of scholarly work and that scholarship can take many forms.
- Demonstrate persistence and employ multiple strategies in research and discovery processes.
- Identify gaps in their own knowledge and formulate appropriate questions for investigations in academic settings.
- Evaluate the quality of information and acknowledge expertise.
- Use information effectively in their own work and make contextually appropriate choices for sharing their scholarship.
- Use information ethically and legally.

Madison Foundations Structure

Madison Foundations consists of nine credits distributed across four program requirements: **Critical Thinking**, **Human Communication**, **Writing** and **Information Literacy**. These requirements are satisfied with the completion of three courses: one each specifically for **Critical Thinking**, **Human**

Communication, and **Writing**. These three courses collectively satisfy the **Information Literacy** requirement as well.

Completion of all requirements in **Madison Foundations** is required of students in their first academic year at JMU, and the courses may be taken in any order. **Madison Foundations** courses are not repeatable without permission, which is given based on course availability. There are no overrides available in **Madison Foundations** courses during the Fall and Spring semesters. Summer term is an additional opportunity to complete **Madison Foundations** coursework.

Madison Foundations Structure

Completion of all courses and tests in Madison Foundations is required of students in their first academic year at JMU.

Critical Thinking

Each of the courses satisfying the **Critical Thinking** requirement presents students with various techniques and approaches to critical thinking such as analyzing and evaluating information, arguments, premises and concepts. Critical thinking fosters inquiry and problem-solving abilities. Depending upon the course, the content focuses on the function of language, basic business principles, issues in recent history, mediated communication, informal logical reasoning or problem-solving in science and technology.

Choose one of the following:

BUS 160. Business Decision Making in a Modern Society [C1CT] **Credits: 3.00**
 HIST 150. Critical Issues in Recent Global History [C1CT] **Credits: 3.00**
 ISAT 160. Problem Solving Approaches in Science and Technology [C1CT] **Credits: 3.00**
 PHIL 120. Critical Thinking [C1CT] **Credits: 3.00**
 PHIL 150. Ethical Reasoning [C1CT] **Credits: 3.00**
 SMAD 150. Mediated Communication: Issues and Skills [C1CT] **Credits: 3.00**
 UNST 300. Integrative General Education [C1CT] **Credits: 3.00**

Additional Information

Students pursuing a Bachelor of Arts (B.A.) degree may not use either PHIL 120 or PHIL 150 to fulfill the B.A. philosophy course requirement.

Students who have received credit for one **Critical Thinking** class are not eligible to receive credit for a second **Critical Thinking** class without permission.

Human Communication

Each of the courses satisfying the **Human Communication** requirement introduces students to the study of human communication as a process. Emphasis is on examining the role of self-concept, perception, culture, verbal and nonverbal dimensions in the communication process; applying critical listening skills; and developing skills in oral presentations. Depending upon the course, the content focuses on an overview of the principles and practices of interpersonal, small group and public communication, or constructing informative and persuasive speeches with an emphasis on individual public speaking contexts, or constructing informative and persuasive group presentations.

Choose one of the following:

SCOM 121. Fundamental Human Communication: Presentations [C1HC] **Credits: 3.00**

SCOM 122. Fundamental Human Communication: Individual Presentations [C1HC]

Credits: 3.00

SCOM 123. Fundamental Human Communication: Group Presentations [C1HC] **Credits: 3.00**

Additional Information

Students who have received credit for one **Human Communication** class are not eligible to receive credit for a second **Human Communication** class.

Writing

The course that satisfies the **Writing** requirement provides students with the tools to study the role of the writer, the purpose of documents, and the contexts and audience expectations within which documents are produced. Writing is taught as a process involving invention, collaboration, research and revision. Students read, analyze and create texts in multiple genres using traditional and digital communication tools. Content areas may include public and professional discourse, culture, humanities, and technology.

Complete the following:

WRTC 103. Rhetorical Reading and Writing [C1W] **Credits: 3.00**

Additional Information

Students may not repeat WRTC 103 for credit.

Sociocultural and Wellness Area (formerly Cluster Five: Individuals in the Human Community)

Kethera A.J. Moore, **Sociocultural and Wellness Area Coordinator**

Through studying the many variables that influence human behavior in contemporary society, students gain an understanding of the relationship between the individual and a diverse community and develop a sense of responsibility for self and community. Students explore how individuals develop and function in the social, psychological, emotional, physical and spiritual dimensions.

Sociocultural and Wellness Area Learning Outcomes

Wellness Domain

After completing a **Wellness Domain** course students will be able to:

- Understand the dimensions of wellness, the various factors affecting each dimension and how dimensions are interrelated.
- Understand the relationship between personal behaviors and lifelong health and wellness.
- Assess their own levels of health and wellness and understand how these levels impact their quality of life.
- Identify and implement strategies to improve their wellness.

Sociocultural Domain

After completing a **Sociocultural Domain** course students will be able to:

- Understand how individual and sociocultural factors interact in the development of the beliefs, behaviors and experiences of oneself and others.

- Discern the extent to which sources of information about the sociocultural domain are reputable and unbiased.
- Evaluate the extent to which the approach to and uses of psychosocial research are ethical and appropriate.

Sociocultural and Wellness Area Structure

The **Sociocultural and Wellness Area** consists of six credits distributed across two program requirements: the **Wellness Domain** and the **Sociocultural Domain**. Students will choose one course to satisfy each of these two requirements. **Sociocultural and Wellness Area** requirements may be completed concurrently or individually, in any order.

Students are expected to complete **Sociocultural and Wellness Area** course work during their first two years at the university and are strongly encouraged to complete their **Wellness Domain** coursework in their first year.

Wellness Domain

Each of the courses satisfying the **Wellness Domain** requirement examines the individual behaviors that influence the dimensions of health and wellness.

Students will gain knowledge and conduct self-assessments relating to a variety of health topics. In addition, students will learn strategies that improve lifetime health and wellness. Courses include a physical wellness component as a part of the course requirements.

Choose one of the following:

HTH 100. Personal Wellness [C5W] **Credits: 3.00**

KIN 100. Lifetime Fitness and Wellness (2,2) [C5W] **Credits: 3.00**

Sociocultural Domain

Each of the courses satisfying the **Sociocultural Domain** requirement focuses on sociocultural and psychological aspects of individuals interacting within societal contexts. These courses enable students to develop ethical and scientifically-based critical thinking about human behavior and social interaction.

Students study the formation and functions of social relationships and reflect on personal responsibilities to diverse communities within which people function throughout life. Students explore sociocultural and psychological aspects of personal belief systems, self-identity and assumptions about others.

Choose one of the following:

PSYC 101. General Psychology [C5SD] **Credits: 3.00**

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

SOCI 140. Microsociology: The Individual in Society [C5SD] **Credits: 3.00**

WGSS 200. Introduction to Women's, Gender and Sexuality Studies [C5SD] **Credits: 3.00**

The Natural World (formerly Cluster Three: The Natural World)

Elizabeth T. Brown, **The Natural World Coordinator**

Scientific investigations into the natural world use analytical methods to evaluate evidence, build and test models based on that evidence, and develop theories. Mathematical studies of form and pattern can create a language that assists in these investigations. Courses in **The Natural World** provide students

with the opportunity to develop problem-solving skills in science and mathematics at the college level. Students will be introduced to a substantial body of scientific facts, concepts, models and theories, and they will also gain experience in using basic mathematics to obtain knowledge about the natural world. This area is cross-disciplinary, thereby demonstrating boundaries and connections among mathematics, the sciences and other aspects of culture.

Typically students begin **The Natural World** during their first year and should complete it by the end of their sophomore year. Individual courses satisfy requirements in a number of major and professional programs. Students are encouraged to select appropriate courses in **The Natural World** on the basis of their backgrounds, interests and educational objectives.

The Natural World Learning Outcomes

After completing courses in **The Natural World** students will be able to meet the following objectives:

- Describe the methods of inquiry that lead to mathematical truth and scientific knowledge and be able to distinguish science from pseudoscience.
- Use theories and models as unifying principles that help us understand natural phenomena and make predictions.
- Recognize the interdependence of applied research, basic research and technology, and how they affect society.
- Identify the interdependence of natural systems with the social, economic and ethical aspects of global and local issues.
- Use graphical, symbolic and numerical methods to analyze, organize and interpret natural phenomena.
- Discriminate between association and causation and identify the types of evidence used to establish causation.
- Formulate hypotheses, identify relevant variables and design experiments to test hypotheses.
- Evaluate the credibility, use and misuse of scientific and mathematical information in scientific developments and public-policy issues.

The Natural World Structure

The Natural World consists of 10 credits distributed across four program requirements representing four different aspects of scientific knowledge: **Quantitative Reasoning**, **Physical Principles**, **Natural Systems** and **Lab Experience**. Students will choose one course to satisfy each of these four requirements. **Quantitative Reasoning** consists of mathematics or statistics courses. **Physical Principles** and **Natural Systems** consist of science courses. The requirements may be completed in any order, except in the case of courses denoted by an asterisk (*), which have a mathematics and/or science prerequisite or corequisite. In addition, students are required to have at least one lab experience. Certain courses are designed for future teachers, and enrollment in these courses may be limited to Education majors; these courses are indicated with a double asterisk (**).

Quantitative Reasoning

Students build mathematical models of systems and learn to understand, interpret and analyze data that is numerical in nature.

Choose one of the following:

ISAT 151. Topics in Applied Calculus in ISAT [C3QR] **Credits: 4.00**
 ISAT 251. Topics in Applied Statistics in ISAT [C3QR] **Credits: 3.00**
 MATH 103. The Nature of Mathematics [C3QR] **Credits: 3.00**
 MATH 105. Quantitative Literacy and Reasoning [C3QR] **Credits: 3.00**
 MATH 110. Mathematics for Elementary and Middle School Teachers I [C3QR] **Credits: 4.00** (Students who have taken MATH 107 prior to the Fall 2021 may count MATH 107 in place of MATH 110 towards General Education.)
 MATH 205. Introductory Calculus I [C3QR] **Credits: 3.00**
 MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**
 MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**
 MATH 231. Calculus with Functions I [C3QR] **Credits: 3.00**
 MATH 235. Calculus I [C3QR] **Credits: 4.00**

Physical Principles

Each of the courses satisfying the **Physical Principles** requirement investigates underlying principles of nature. These principles are applied to build models, often quantitative in nature, that explore and explain a variety of natural phenomena.

Choose one of the following:

ASTR 120. The Solar System [C3PP] **Credits: 3.00**
 ASTR 121. Stars, Galaxies, & Cosmology [C3PP] **Credits: 3.00**
 CHEM 120. Concepts of Chemistry [C3PP] **Credits: 3.00**
 CHEM 131. General Chemistry I [C3PP] **Credits: 3.00** (CHEM 131L required lab corequisite)*
 ENVT 101. Perspectives in Environmental Science [C3PP] **Credits: 3.00**
 ISAT 100. Environmental and Energy Sustainability [C3PP] **Credits: 3.00**
 ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00** (includes lab)
 ISCI 101. Physics, Chemistry & the Human Experience [C3PP] **Credits: 3.00**
 ISCI 172. Physical Science for Teachers [C3PP] **Credits: 3.00** **
 PHYS 121. The Physical Nature of Light and Sound (3, 1) [C3PP] **Credits: 4.00** (includes lab)
 PHYS 140. College Physics I [C3PP] **Credits: 3.00** (PHYS 140L required lab corequisite)
 PHYS 215. Energy and the Environment [C3PP] **Credits: 3.00**
 PHYS 240. University Physics I [C3PP] **Credits: 3.00**

Natural Systems

Each of the courses satisfying the **Natural World** requirement explores the behavior of earth and life systems. Students will investigate interactions within these systems, between the systems and their environment, and with society.

Choose one of the following:

ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**
 BIO 103. Contemporary Biology [C3NS] **Credits: 3.00**
 BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00**
 BIO 270. Human Physiology [C3NS] **Credits: 3.00**
 GEOL 102. Environment: Earth [C3NS] **Credits: 3.00**
 GEOL 110. Physical Geology [C3NS] **Credits: 3.00** (GEOL 110L required lab corequisite) *
 GEOL 115. Earth Systems and Climate Change [C3NS] **Credits: 3.00**
 GEOL 210. Applied Physical Geology [C3NS] **Credits: 3.00** *
 GEOL 211. Introduction to Oceanography [C3NS] **Credits: 3.00**
 ISAT 113. Biotechnology Issues in Science and Technology [C3NS] **Credits: 3.00** (ISAT 113L required lab corequisite)*

ISCI 171. Earth and Planetary Science for Teachers [C3NS] **Credits: 3.00** **
PSYC 122. The Science of Vision and Audition [C3NS] **Credits: 3.00**

Lab Experience

Each of the courses satisfying the **Lab Experience** emphasizes the observational and experimental nature of science. Through hands-on experiential learning, students will make observations and use them to test predictions and hypotheses.

Choose one of the following:

Physical Principles or Natural Systems course with a lab included, or:

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00** (BIO 140 required prerequisite or corequisite)*

BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00** (BIO 270 required prerequisite or corequisite)*

CHEM 131L. General Chemistry Laboratory [C3L] **Credits: 1.00** (CHEM 131 required corequisite)*

GEOL 110L. Physical Geology Laboratory [C3L] **Credits: 1.00** (GEOL 110 required corequisite)*

GEOL 115L. Earth Systems and Climate Change Lab [C3L] **Credits: 1.00** (GEOL 115 required prerequisite or corequisite)*

ISAT 113L. Biotechnology Issues in Science and Technology Laboratory [C3L] **Credits: 1.00** (ISAT 113 required corequisite)*

ISCI 104. Scientific Perspectives [C3L] **Credits: 1.00**

ISCI 173. Life and Environmental Science for Teachers [C3L] **Credits: 3.00** **

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00** (PHYS 140 required corequisite)*

PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00** (PHYS 240 required prerequisite or corequisite)*

Diaspora in a global context. Courses taken to fulfill program requirements are drawn from several departments in the humanities, social sciences and sciences. Students in the program will examine the key disciplines, concepts, methods and topics in African, African American and Diaspora studies.

The AAAD minor is open to all JMU undergraduate students. Courses taken to complete the minor may also be used to satisfy the student's major, with the permission of the major adviser, as well as General Education requirements.

The AAAD minor requires:

- Successful completion of 19 credit hours according to the requirements listed below.
- No more than nine hours from a single discipline.

Required Courses: 4 Credit Hours

AAAD 200. Introduction to African, African American and Diaspora Studies [C4GE]

Credits: 3.00

AAAD 489. African, African American and Diaspora Studies Senior Research Experience

Credits: 1.00 ²

Choose five, one of which must be at the 400 level: 15 Credit Hours

AAAD 300. Special Topics in African, African American and Diaspora Studies **Credits: 3.00**

AAAD 400. Advanced Topics in African, African American and Diaspora Studies **Credits: 3.00**

AAAD 401. Internship in African, African American and Diaspora Studies **Credits: 1.00-6.00**

AAAD 488. African American Art **Credits: 3.00**

ANTH 280. Peoples and Cultures of Sub-Saharan Africa **Credits: 3.00**

ANTH 391. Study Abroad **Credits: 1.00 - 6.00**

ANTH 395. Special Topics in Anthropology **Credits: 3.00** ¹

ANTH 436. Afro-Latin America **Credits: 3.00**

ART 200. Art in General Culture [C2VPA] **Credits: 3.00** ¹

ARTH 210. African Art & Culture in the Humanities **Credits: 3.00**

ARTH 312. African Art: Sub-Saharan **Credits: 3.00**

ARTH 320. Travel Study in Art History **Credits: 3.00** ¹

ARTH 418. Modern and Contemporary African Art **Credits: 3.00**

ARTH 419. Topics in African Art **Credits: 3.00**

ARTH 424. Arts of Ancient Egypt **Credits: 3.00**

ARTH 426. Advanced Topics in Cross-Cultural Art **Credits: 3.00-9.00** ¹

ARTH 488. African American Art **Credits: 3.00**

ARTH 489. Topics in Art History **Credits: 3.00** ¹

BIO 426. Topics in Biology **Credits: 1.00 - 4.00** ¹

BIO 427. Topics in Biology with Laboratory **Credits: 1.00 - 4.00** ¹

EDUC 310. Teaching in a Diverse Society **Credits: 3.00**

EDUC 490. Special Topics in Education **Credits: 1.00 - 4.00** ¹

ELED 310. Diversity in Elementary Education **Credits: 3.00**

ENG 239. Studies in World Literature [C2L] **Credits: 3.00** ¹

ENG 260. Survey of African American Literature [C2L] **Credits: 3.00**

ENG 302. Special Topics in Literature and Language **Credits: 3.00** ¹

ENG 332. Studies in Popular Genres **Credits: 3.00** ¹

ENG 358. Oral Literature **Credits: 3.00** ¹

ENG 359. Studies in African American Literature **Credits: 3.00**

ENG 361. African American Fiction **Credits: 3.00**

Cross Disciplinary Minors

African, African American and Diaspora Studies Minor

Tatiana Benjamin, **Co-Coordinator**

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Website: <http://www.jmu.edu/africana/undergraduate-minor.shtml>

The minor in African, African American and Diaspora Studies (AAAD) broadens students' world perspectives by enhancing their understanding of the peoples, identities and institutions of Africa and the African Diaspora. The AAAD program employs interdisciplinary approaches to analyze Africa and the African

ENG 362. African American Poetry **Credits: 3.00**
 ENG 377. Introduction to African Literature **Credits: 3.00**
 ENG 385. Special Topics in Film Study **Credits: 3.00**¹
 ENG 405. Advanced Studies in Anglophone Literature **Credits: 3.00**^{1,2}
 ENG 408. Advanced Studies in African American Literature **Credits: 3.00**
 ENG 410. Advanced Studies in Author **Credits: 3.00**¹
 ENG 412. Special Topic Seminar **Credits: 3.00**¹
 ENG 423. Advanced Studies in Gender and Sexuality in Literature **Credits: 3.00**¹
 ENG 432. Advanced Studies in African Literature **Credits: 3.00**
 ENGR 498. Advanced Topics in Engineering **Credits: 1.00-3.00**¹
 GEOG 335. Geography of Africa **Credits: 3.00**
 GEOG 339. Geography of the Caribbean **Credits: 3.00**
 GEOG 491. International Studies **Credits: 1.00 - 3.00**¹
 HIST 263. Africa **Credits: 3.00**
 HIST 307. The Trans-Atlantic Slave Trade **Credits: 3.00**
 HIST 341. Selected Themes in World History **Credits: 3.00**
 HIST 356. African American History Since 1865 **Credits: 3.00**
 HIST 391. Travel Studies Seminar **Credits: 3.00**
 HIST 436. Afro-Latin America **Credits: 3.00**
 HIST 439. Selected Topics in American History **Credits: 3.00**¹
 HIST 470. Modern Africa **Credits: 3.00**
 HIST 489. Selected Topics in World History **Credits: 3.00**^{1,2}
 HRD 123. Developing Multicultural Competency for Effective Facilitation **Credits: 3.00**
 HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (African Cultures in the Humanities)¹
 HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (African Experience)
 IB 298. Special Topics in International Business **Credits: 3.00**¹
 IDLS 382. Contemporary United States **Credits: 3.00**²
 IDLS 385. The Unfinished Journey of People of Color in the U.S. **Credits: 3.00**
 IDLS 391. Study Abroad **Credits: 1.00 - 6.00**¹
 IDLS 400. Seminar in Liberal Studies **Credits: 3.00**^{1,2}
 ISAT 480. Topics in Integrated Science & Technology **Credits: 1.00 - 4.00**¹
 JUST 301. Advanced Level Special Topics in Justice Studies **Credits: 3.00**^{1,2}
 JUST 328. Race, Class and Justice **Credits: 3.00**
 JUST 352. Global Migration **Credits: 3.00**
 JUST 357. Environmental Justice **Credits: 3.00**
 MUS 200. Music and Culture [C2VPA] **Credits: 3.00**¹
 MUS 356. History of Jazz in America **Credits: 3.00**
 POSC 326. Civil Rights **Credits: 3.00**
 POSC 353. African Politics **Credits: 3.00**
 POSC 361. Topics in International Relations **Credits: 3.00**¹
 POSC 371. Topics in Comparative Politics **Credits: 3.00**^{1,2}
 REL 330. Religions of Africa and the African Diaspora **Credits: 3.00**¹
 REL 336. African American Religion **Credits: 3.00**
 SCOM 248. Intercultural Communication **Credits: 3.00**
 SCOM 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**
 SCOM 313. Topics in Communication Studies **Credits: 1.00 - 3.00**¹
 SCOM 318. Practicum in Communication Studies **Credits: 1.00 - 6.00**¹
 SCOM 355. Food as Communication **Credits: 3.00**¹
 SCOM 395. Study Abroad Seminar **Credits: 3.00 - 6.00**¹
 SMAD 498. Senior Seminar in Media Arts and Design **Credits: 3.00**^{1,2}
 SOCI 336. Race and Ethnicity **Credits: 3.00**
 SOCI 354. Social Inequality **Credits: 3.00**
 SOCI 391. Study Abroad **Credits: 1.00 - 6.00**¹
 STAD 322. Equity, Inclusion and Access in Education and Performance **Credits: 3.00**

THEA 323. Youth Theatre **Credits: 3.00**
 THEA 324. Theatre for Young Audiences **Credits: 3.00**
 UNST 390. Special Studies in University Studies **Credits: 1.00 - 3.00**
 UNST 490. Advanced Special Studies in University Studies **Credits: 1.00 - 3.00**¹
 WGSS 300. Special Topics in Women's, Gender and Sexuality Studies **Credits: 3.00**^{1,2}
 WGSS 495. Special Topics in Women's, Gender and Sexuality Studies **Credits: 3.00**^{1,2}

Total: 19 Credit Hours

Footnotes

¹ Course topic and content must focus on the peoples of Africa and/or the African Diasporas as well as be approved by the program coordinator(s).

² Research must have an African and/or African Diaspora focus.

Additional Information

Other appropriate courses not listed above may be considered for the minor. Consult with program coordinators.

In addition to taking these courses, students are encouraged to participate in travel or study programs to Africa, the Caribbean and other relevant areas. Students who want to earn credit hours through participation in an accredited travel/study program are encouraged to do so with prior approval of the coordinators.

American Studies Minor

Laura Henigman, **Coordinator**

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The minor in American studies fosters an understanding of the complexity of U.S., colonial North American and North American indigenous societies through employing a range of disciplinary approaches and topics. Students will enroll in the gateway course AMST 200, and then they will select from a list of courses drawn from a variety of disciplines including literature, history, the fine arts, philosophy and the social sciences.

The minor program in American studies is open to all undergraduate students at JMU. The requirement is the successful completion of 18 hours. Students must take five additional courses from the list below. No more than two courses may be from the same program. See the program coordinator for additional courses that may be substituted.

Core Requirements

AMST 200. Introduction to American Studies [C2HQC] **Credits: 3.00**

Choose five: 15 Credit Hours

ANTH 265. Peoples and Cultures of Latin America and the Caribbean **Credits: 3.00**
 ANTH 312. The Native Americans **Credits: 3.00**
 ARTH 380. American Art to 1870 **Credits: 3.00**
 or
 ARTH 382. American Art from 1870 **Credits: 3.00**
 ARTH 484. Art of the Americas **Credits: 3.00**
 ENG 342. Early American Literature **Credits: 3.00**
 ENG 343. Antebellum American Literature **Credits: 3.00**
 ENG 344. Late Nineteenth Century American Literature **Credits: 3.00**
 ENG 352. The American Novel to 1914 **Credits: 3.00**

ENG 356. Modern American Novel **Credits: 3.00**
 ENG 357. Contemporary American Literature **Credits: 3.00**
 ENG 359. Studies in African American Literature **Credits: 3.00**
 ENG 360. Introduction to Ethnic American Literature **Credits: 3.00**
 ENG 361. African American Fiction **Credits: 3.00**
 ENG 362. African American Poetry **Credits: 3.00**
 ENG 363. Native American Literature **Credits: 3.00**
 ENG 364. Introduction to Asian American Literature **Credits: 3.00**
 ENG 367. Latinx Literature **Credits: 3.00**
 HIST 303. Virginia's Place in #VastEarlyAmerica **Credits: 3.00**
 HIST 304. Native Peoples of the United States **Credits: 3.00**
 HIST 307. The Trans-Atlantic Slave Trade **Credits: 3.00**
 HIST 313. The History of Latinos in the United States **Credits: 3.00**
 HIST 315. Global History of Sport **Credits: 3.00**
 HIST 316. The Life and Times of James Madison, 1751-1836 **Credits: 3.00**
 HIST 319. Women at Work in U.S. History **Credits: 3.00**
 HIST 320. Women in U.S. History **Credits: 3.00**
 HIST 322. Jim Crow South **Credits: 3.00**
 HIST 323. The Old South **Credits: 3.00**
 HIST 326. How Cars Changed Everything **Credits: 3.00**
 HIST 327. Makers, Users, Skeptics and Thieves: Americans and Their Technologies **Credits: 3.00**
 HIST 336. We the People?: The American Revolution Considered **Credits: 3.00**
 HIST 338. U.S. Urban History **Credits: 3.00**
 HIST 339. Selected Themes in U.S. History **Credits: 3.00**
 HIST 343. History of Today **Credits: 3.00**
 HIST 345. Pills and Potions: Histories of U.S. Health Care and Medicine **Credits: 3.00**
 HIST 347. Advertising America **Credits: 3.00**
 HIST 350. Virginia **Credits: 3.00**
 HIST 356. African American History Since 1865 **Credits: 3.00**
 HIST 362. American Material Religion **Credits: 3.00**
 HIST 374. The Southern Plantation: Race, Space and Gender in an American Landscape **Credits: 3.00**
 HIST 397. U.S. Military History **Credits: 3.00**
 IDLS 381. Environmental Thought and Activism **Credits: 3.00**
 IDLS 382. Contemporary United States **Credits: 3.00**
 IDLS 385. The Unfinished Journey of People of Color in the U.S. **Credits: 3.00**
 MUS 203. Music in America [C2VPA] **Credits: 3.00**
 MUS 356. History of Jazz in America **Credits: 3.00**
 PHIL 370. American Philosophy **Credits: 3.00**
 POSC 330. American Political Thought **Credits: 3.00**
 POSC 380. The U.S. Presidency **Credits: 3.00**
 POSC 382. The Role of Religion in American Politics **Credits: 3.00**
 POSC 384. Minority Group Politics **Credits: 3.00**
 POSC 385. The U.S. Congress **Credits: 3.00**
 REL 210. Religion in America **Credits: 3.00**
 REL 324. Latinx and Latin American Christianity **Credits: 3.00**
 REL 330. Religions of Africa and the African Diaspora **Credits: 3.00**
 REL 332. Born Again Religion **Credits: 3.00**
 REL 334. New Religious Movements **Credits: 3.00**
 REL 336. African American Religion **Credits: 3.00**
 SCOM 346. Free Speech in America **Credits: 3.00**
 SMAD 372. Media History **Credits: 3.00**
 SOCI 318. Sociology of Immigration **Credits: 3.00**
 SOCI 336. Race and Ethnicity **Credits: 3.00**
 SOCI 341. Sociology of Education **Credits: 3.00**

SOCI 357. Sociology of Disasters **Credits: 3.00**
 SOCI 368. Contemporary American Culture **Credits: 3.00**
 or
 ANTH 368. Contemporary American Culture **Credits: 3.00**
 THEA 485. American Theatre **Credits: 3.00**

Total: 18 Credit Hours

Asian Studies Minor

Michael Seth, **Coordinator**

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The purpose of this cross disciplinary program is to broaden the students' perspective by enhancing their understanding and appreciation of Asian culture and institutions. This program combines the offerings of several academic units, such as anthropology; art, design and art history; economics; English; geography; history; international business; foreign languages; political science; and religion and philosophy.

The minimum requirement for a minor in Asian studies is 18 credit hours. These 18 hours can include any of the following courses. Special topics courses not listed can be applied to the minor degree with approval of the program coordinator. A maximum of eight hours of Chinese, Japanese or Korean language may be included to satisfy credit hour requirements of the minor.

Courses

ANTH 197. Archaeology **Credits: 3.00**
 ANTH 295. People and Cultures of East Asia **Credits: 3.00**
 ANTH 306. Japanese Society and Culture **Credits: 3.00**
 or
 SOCI 306. Japanese Society and Culture **Credits: 3.00**
 ARTH 430. Far Eastern Art **Credits: 3.00**
 CHIN 101. Elementary Chinese I **Credits: 3.00 - 4.00**
 CHIN 102. Elementary Chinese II **Credits: 3.00 - 4.00**
 CHIN 231. Intermediate Chinese I **Credits: 3.00**
 CHIN 232. Intermediate Chinese II **Credits: 3.00**
 CHIN 300. Chinese Grammar and Communication **Credits: 3.00**
 CHIN 397. Intensive Reading and Writing in Chinese I **Credits: 3.00**
 ECON 312. Comparative Economic Systems **Credits: 3.00**
 ENG 378. Studies in South Asian Literature **Credits: 3.00**
 GEOG 334. Geography of East and Southeast Asia **Credits: 3.00**
 GEOG 336. Environmental Hazards: A Focus on Southeast Asia **Credits: 3.00**
 GEOG 338. Geography of the Philippine Islands: Problems and Possibilities **Credits: 3.00**
 GEOG 375. Political Geography **Credits: 3.00**
 HUM 200. Great Works [C2L] **Credits: 3.00 (Asia)**
 HUM 252. Global Cultures [C2HQC] **Credits: 3.00 (Cross-Cultural Perspectives – East Asian Humanities)**
 HUM 252. Global Cultures [C2HQC] **Credits: 3.00 (Cross-Cultural Perspectives – Global South Asia) Credits: 3.00**
 HUM 252. Global Cultures [C2HQC] **Credits: 3.00 (Cross Cultural Perspectives – Gandhi, Non-Violence and Global Transformation) Credits: 3.00**
 HIST 274. Modern East Asia **Credits: 3.00**

HIST 311. China to 1600 **Credits: 3.00**
 HIST 312. Japan Since 1600 **Credits: 3.00**
 HIST 371. India **Credits: 3.00**
 HIST 377. History of Korea **Credits: 3.00**
 HIST 378. China in the Modern World **Credits: 3.00**
 IB 298. Special Topics in International Business **Credits: 3.00** (*Business Environment in China and Southeast Asia*)
 IB 298. Special Topics in International Business (*Chinese Business Operations*) **Credits: 3.00**
 JAPN 101. Elementary Japanese I **Credits: 4.00**
 JAPN 102. Elementary Japanese II **Credits: 4.00**
 JAPN 212. Intensive Japanese II **Credits: 6.00**
 JAPN 231. Intermediate Japanese I **Credits: 3.00**
 JAPN 232. Intermediate Japanese II **Credits: 3.00**
 JAPN 300. Japanese Grammar and Communication **Credits: 3.00**
 JAPN 320. Japanese Oral and Written Communications **Credits: 3.00**
 JAPN 446. Special Topics in Japanese Literature **Credits: 3.00**
 JAPN 447. Special Topics in Japanese Culture **Credits: 3.00**
 KOR 101. Elementary Korean I **Credits: 3.00 - 4.00**
 KOR 102. Elementary Korean II **Credits: 3.00 - 4.00**
 KOR 231. Intermediate Korean I **Credits: 3.00**
 KOR 232. Intermediate Korean II **Credits: 3.00**
 KOR 300. Korean Grammar and Communication **Credits: 3.00**
 KOR 320. Korean Oral and Written Communication **Credits: 3.00**
 KOR 447. Special Topics in Korean Culture **Credits: 3.00**
 POSC 355. East Asian Politics **Credits: 3.00**
 POSC 356. Politics of China **Credits: 3.00**
 REL 310. (Re)thinking Order and Chaos: An Introduction to Hinduism **Credits: 3.00**
 REL 314. Gandhi and the Other 9/11 **Credits: 3.00**
 REL 410. Dharma/Adharma: Hindu Ethical Reasoning **Credits: 3.00**
 REL 288. Introduction to Buddhism **Credits: 3.00**
 REL 313. Classical Chinese Thought **Credits: 3.00**
 REL 317. Introduction to Daoism **Credits: 3.00**
 REL 386. Topics in Buddhist Studies **Credits: 3.00**
 REL 387. Buddhist Literature and Liberation **Credits: 3.00**
 REL 388. Tibetan Buddhism **Credits: 3.00**
 REL 488. Buddhism in the Modern World **Credits: 3.00**

Total: 18 Credit Hours

Biochemistry and Molecular Biology Minor

Jonathan Monroe, **Coordinator**

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Gina MacDonald, **Coordinator**

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The biochemistry and molecular biology minor is open to students not majoring in biotechnology. The following are prerequisites for entry into the biochemistry and molecular biology minor program (some prerequisites are not shown; see the course descriptions).

Prerequisites

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**

BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

CHEM 241. Organic Chemistry I **Credits: 3.00**

CHEM 242. Organic Chemistry II **Credits: 3.00**

Choose from the following:

CHEM 242L. Organic Chemistry Laboratory **Credits: 2.00**

CHEM 287L. Integrated Inorganic/Organic Laboratory I **Credits: 2.00** - CHEM 288L. Integrated Inorganic/Organic Laboratory II **2.00**

Required Courses

BIO 240. Genetics **Credits: 3.00 and**

BIO 240L. Genetics Laboratory **Credits: 1.00**

BIO 480. Advanced Molecular Biology **Credits: 3.00**

CHEM 361. Biochemistry I **Credits: 3.00**

or

BIO 361. Biochemistry I **Credits: 3.00**

CHEM 362. Biochemistry II **Credits: 3.00**

CHEM 366L. Biochemistry Laboratory **Credits: 2.00**

Choose one of the following: 4-5 Credit Hours

CHEM 331. Physical Chemistry I **Credits: 3.00** including CHEM 336L

CHEM 351. Analytical Chemistry **Credits: 4.00**

Total: 20-21 Credit Hours

Book Arts Minor

Dawn M. McCusker, **Coordinator**

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Karin Tollefson-Hall, **Coordinator**

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The minor in book arts is a cross disciplinary program designed to broaden students' understanding of the value and role of the art of the book in general culture while enhancing written and visual creativity, artistic production, and the ability to think independently. Students enrolled in any degree program may minor in book arts by completing a minimum of 21 credit hours. The student's minor program is subject to the approval of the School of Art, Design and Art History director.

A total of nine credit hours may be double counted between the minor and the major.

Requirements

Required Courses: 15 Credit Hours

ART 102. Two-Dimensional Design (0,6) **Credits: 3.00**

ART 104. Drawing I (0,6) **Credits: 3.00**

ART 276. Introductory Book Arts: Materials and Structures **Credits: 3.00**

ENG 415. Advanced Studies in Textuality and the History of the Book **Credits: 3.00**

Choose one of the following:

ENG 391. Introduction to Creative Writing – Nonfiction **Credits: 3.00**

ENG 392. Introduction to Creative Writing – Poetry **Credits: 3.00**

ENG 393. Introduction to Creative Writing – Fiction **Credits: 3.00**

Choose two of the following: 6 Credit Hours

ART 230. Introduction to Fiber Processes (0,9) **Credits: 3.00**

ART 232. Introduction to Fiber Arts: Structures **Credits: 3.00**

ART 234. Introduction to Fiber Arts: Surfaces **Credits: 3.00**

ART 260. Introductory Photography: Black and White (0,9) **Credits: 3.00**

ART 270. Printmaking: Screenprint (0,9) **Credits: 3.00**

or

ART 272. Printmaking: Relief and Intaglio **Credits: 3.00**

or

ART 274. Printmaking: Lithography (0,9) **Credits: 3.00**

ART 280. Sculpture (0,9) **Credits: 3.00**

ART 336. Pulp **Credits: 3.00**

GRPH 101. Digital Media Design I (0, 9) **Credits: 3.00**

ART 375. Letterpress **Credits: 3.00**

or

GRPH 375. Letterpress **Credits: 3.00**

ART 376. Intermediate Book Arts: Concept, Content, Form **Credits: 3.00**

or

GRPH 376. Intermediate Book Arts: Concept, Content, Form **Credits: 3.00**

ENG 496. Advanced Topics in Creative Writing **Credits: 3.00**

Total: 21 Credit Hours

British Communication and Media Minor

Dietrich Maune, **Coordinator**

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The cross disciplinary British communication and media minor enables students to expand their knowledge of communication and media in Great Britain, and to enhance their appreciation of the impact culture has on communication and media. Students must participate in the JMU semester or summer in London program to complete this minor.

The minor requires at least 18 credit hours, chosen from courses offered both at JMU and in London. Students may double-count a maximum of six credit hours toward both a major and this minor.

Courses

Required Courses: 6 Credit Hours

SCOM 248. Intercultural Communication **Credits: 3.00**¹

SCOM 360L. British Media and Society **Credits: 3.00**²

or

SMAD 360L. British Media and Society **Credits: 3.00**²

or

WRTC 360L. British Media and Society **Credits: 3.00**²

or

HUM 251L. British Media and Society **Credits: 3.00**²

Footnotes

¹ Must be taken in Harrisonburg at JMU. Regularly offered in fall semesters.

² Must be taken in London.

Elective Courses: 12 Credit Hours

Select at Least four of the following courses:

SCOM 347L. Communication, Diversity and Popular Culture **Credits: 3.00**²

SMAD 301L. The Media Arts: Culture By Design **Credits: 3.00**²

or

SCOM 351. Visual Rhetoric **Credits: 3.00**

or

WRTC 351L. Visual Rhetoric **Credits: 3.00**²

or

ARTH 389. Topics in Art History – The Media Arts: Culture by Design²

ENG 463L. Film Adaptations **Credits: 3.00**²

or

SMAD 463L. Film Adaptations **Credits: 3.00**²

or

SCOM 395. Film Adaptations: British Literature and Film²

SCOM 472L. Media and Politics **Credits: 3.00**²

or

SMAD 472L. Media and Politics **Credits: 3.00**²

or

POSC 371L. Special Studies London **Credits: 3.00**²

THEA 449. London Theatre **Credits: 3.00**²

or

ENG 412N. Special Topic Seminar **Credits: 3.00**²

or

HUM 200L. Great Works – London [C2L] **Credits: 3.00**²

WRTC 314. Writing in the Public Sphere **Credits: 3.00**²

or

SCOM 321L. Writing in The Public Sphere²

IDLS 486. Internship & Field Experience **Credits: 1.00 – 6.00**²

Footnotes

² Must be taken in London.

Total: 18 Credit Hours

Additional Information

Appropriate independent studies, directed projects, and Semester in London Faculty Member in Residence courses may be counted as part of the minor with approval by the minor coordinator. Students studying in London during the summer will need to complete one additional course, approved by the minor coordinator, following the student's return to JMU.

Chronic Illness Minor

Christina Lam, **Coordinator**

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The cross disciplinary minor in chronic illness prepares students from any major to understand and respond to the impacts of chronic illness on the individual, family, health care system and society. Knowledge and strategies to address the prevention and the management of chronic illness across its trajectory will enhance the skills and abilities of students who plan to practice in any profession. The minor is open to all undergraduate students at JMU and

requires a minimum of 18 credits with no more than six credits in the student's major counting toward the minor.

Deadlines for submission of the Application to Declare a Chronic Illness Minor are due to the Chronic Illness Minor Coordinator by:

The last day of September for fall registration for the spring term.

The last day of February for spring registration for the fall term.

Core Requirements

Students completing the nursing major must complete the core requirements prior to starting major courses

NSG 390. Impact of Chronic Illness **Credits: 3.00**

NSG 391. Living Successfully with Chronic Illness **Credits: 3.00**

Elective Requirements: 6-12 Credit Hours

(Select 12 credits. Students completing the nursing major should select six credits.)

ANTH 360. Medical Anthropology **Credits: 3.00**

EXED 306. Lifespan Issues for Individuals with Disabilities **Credits: 3.00**

GERN 280. Social Gerontology **Credits: 3.00**

or

SOCI 280. Social Gerontology **Credits: 3.00**

GERN 305. Programs and Services for the Elderly **Credits: 3.00**

HTH 255. Chronic Disease and Disabilities **Credits: 3.00**¹

HTH 351. Health Behavior Change **Credits: 3.00**¹

IPE 490. Special Topics in Health and Human Services **Credits: 0.00 - 4.00** (when topic is appropriate)

MSCI 390. The Combat Experience **Credits: 3.00**

KIN 424. Exercise and Nutrition in Chronic Disease **Credits: 3.00**

or

NUTR 455. Exercise and Nutrition in Chronic Disease **Credits: 3.00**

PSYC 304. Death and Dying: Thanatology **Credits: 3.00**

NSG 306. Combating Childhood Obesity **Credits: 1.00**

NSG 308. Empowerment and Resilience **Credits: 1.00**

NSG 310. Helping Persons in Pain **Credits: 2.00**

NSG 314. Rural Health: an Interprofessional Approach **Credits: 3.00**

or

IPE 314. Rural Health: an Interprofessional Approach **Credits: 3.00**

or

SOWK 314. Rural Health: an Interprofessional Approach **Credits: 3.00**

NSG 318. Nursing, Chronic Illness and Health in a Global Context **Credits: 2.00**

NSG 319. Understanding Sexuality across the Health-Illness Continuum **Credits: 2.00**

NSG 322. Integrative Health Care **Credits: 2.00**

NSG 326. Care and Consideration for Children with Special Needs **Credits: 1.00**

NSG 328. Life, Death, and the In-Between **Credits: 1.00**

NSG 329. Best Practices in Diabetes Care **Credits: 2.00**

NSG 330. Medical Innovations **Credits: 3.00**

NSG 360. HHS in Costa Rica: Interprofessional Perspective **Credits: 2.00-4.00**

NSG 361. International Health Perspectives: Malta **Credits: 4.00**

NSG 363. Health Care in Spain: A Cross Cultural Exploration of Illness and Wellness **Credits: 4.00**

NSG 415. Ethical Decision-Making in Healthcare: an Interprofessional Approach **Credits: 1.00**

NSG 490. Special Studies **Credits: 1.00 - 6.00** (when topic is appropriate) (credits vary) see chronic illness minor web page

NSG 490 Study Abroad Experiences (Australia, Kenya, Tanzania) (credits vary)

SOWK 332. Community Mental Health Practice **Credits: 3.00**

Footnotes

¹ Health Sciences majors only

Total: 18 Credit Hours

Classical Studies Minor

Wren Stevens, **Coordinator**

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The minor in classical studies introduces students to the literature, culture, philosophy, history and languages of Greco-Roman civilization. The requirement is successful completion of 18 credits chosen from the following courses offered by participating academic units. Students who take Latin or Greek can apply up to 12 credit hours to the minor.

Required Courses

Choose one of the following: 3 Credit Hours

HUM 250. Foundations of Western Culture [C2HQC] **Credits: 3.00** (The Greek Experience)

HUM 250. Foundations of Western Culture [C2HqC] (The Roman Experience)

HUM 250. Foundations of Western Culture [C2HqC] (The Ancient Mediterranean)

Choose five of the following: 15 Credit Hours

GRK 101. Elementary Greek I **Credits: 3.00 - 4.00**

GRK 102. Elementary Greek II **Credits: 3.00 - 4.00**

GRK 231. Intermediate Greek I **Credits: 3.00**

GRK 232. Intermediate Greek II **Credits: 3.00**

LAT 101. Elementary Latin I **Credits: 3.00 - 4.00**

LAT 102. Elementary Latin II **Credits: 3.00 - 4.00**

LAT 231. Intermediate Latin I **Credits: 3.00**

LAT 232. Intermediate Latin II **Credits: 3.00**

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**

ARTH 424. Arts of Ancient Egypt **Credits: 3.00**

CLAS 100. Latin and Greek Roots of English Words **Credits: 3.00**

CLAS 266. Greek and Roman Classics in Translation **Credits: 3.00**

CLAS 338. Roman Religion **Credits: 3.00**

CLAS 360. Topics in Greek and Roman Culture **Credits: 3.00**

ENG 305. Mythology **Credits: 3.00**

HIST 101. World History to 1500 [C2HQC] **Credits: 3.00**

HIST 369. Greek History, 3000 BC-AD 267 **Credits: 3.00**

HIST 370. Byzantine Empire **Credits: 3.00**

HIST 391. Travel Studies Seminar **Credits: 3.00**

HIST 467. The Roman Republic **Credits: 3.00**

HIST 468. The Roman Empire **Credits: 3.00**

HIST 489. Selected Topics in World History **Credits: 3.00**

PHIL 340. Ancient Greek Philosophy **Credits: 3.00**

PHIL 460. Topics in Classical Philosophy **Credits: 3.00**

POSC 310. Ancient Political Theory: Classical Greek Political Philosophy to Roman Stoicism **Credits: 3.00**

REL 460. Topics in Ancient Jewish and Early Christian Literature **Credits: 3.00**

Total: 18 Credit Hours

Climate Science Minor

Bill Lukens, **Coordinator**

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Mary Kimsey, **Coordinator**

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The Climate Science Minor introduces students to the domain knowledge and analytical skills necessary for understanding and investigating Earth's climate system. The program serves as an organizing framework for students interested in climate science and will broaden disciplinary expertise for advanced study, graduate programs and/or employment. The minor is structured in three tiers:

Introductory lecture and lab courses serve as an entry point to the program (4 credits total);

Content-specific courses build domain knowledge in climate science (minimum of 3 courses);

A minimum of one course focused on mathematical and/or data analytical skills provides tools necessary for working with scientific data; and

The remaining credit hours to fulfill the 18 credit-hour minimum requirement may consist of additional courses closely aligned with climate science, such as undergraduate research, internships and honors theses, upon approval by the program director(s).

Students are encouraged to discuss with their advisers or the program director(s) how climate science may interface with their primary degree program(s). The Climate Science Minor requires a minimum of 18 credit hours, and no more than six credits from the minor may be used to double-count with a major or another minor.

Introductory Lecture and Lab: 4 Credit Hours

A total of four credit hours of introductory lecture and lab course(s) must be taken:

GEOG 210. Physical Geography (2, 2) **Credits: 4.00**

or

GEOL 115. Earth Systems and Climate Change [C3NS] **Credits: 3.00 and**

GEOL 115L. Earth Systems and Climate Change Lab [C3L] **Credits: 1.00**

Content-Specific Courses: 9-10 Credit Hours

Choose a minimum of three courses from the following:

GEOG 301. Introduction to Natural Disasters Response **Credits: 3.00**

GEOG 327. Climatology **Credits: 3.00**¹

GEOG 329. Global Climate Change **Credits: 3.00**¹

GEOG 330. Weather, Climate and Society **Credits: 3.00**

GEOG 430. Dynamics of the Atmosphere **Credits: 3.00**¹

GEOL 211. Introduction to Oceanography [C3NS] **Credits: 3.00**

GEOL 320. Meteorology **Credits: 3.00**

GEOL 355. Geochemistry of Natural Waters **Credits: 3.00**¹

GEOL 406. Paleoclimatology and Paleooceanography **Credits: 3.00**¹

CHEM 353. Environmental Chemistry **Credits: 3.00**¹

BIO 354. Global Climate Change and Life: Ecological and Biological Impacts of Climate Variability **Credits: 4.00**¹

Analytical Skills: 3-4 Credit Hours

At least one course focused on analytical skills must be taken. Choose at least one course from the follow lists, and note that only one programming course or one geospatial course may be counted toward the 18 credit hour total for the minor:

Programming Courses

CS 149. Introduction to Programming **Credits: 3.00**¹

or

MATH 229. Introduction to Applied Statistics Using R [C3QR] **Credits: 3.00**¹

Geospatial Courses

GEOG 215. Introduction to Geographic Information Science and Cartography **Credits: 3.00**

or

GEOG 216. Earth Observation and GPS **Credits: 3.00**

or

GEOL 360. GIS for the Geoscientist **Credits: 3.00**¹

Other Analytical Skills Courses

GEOL 440. Geophysics (3, 2) **Credits: 4.00**¹

GEOL 489. Quantitative Methods in Geology **Credits: 3.00**

GEOG 447. Climates Through Time **Credits: 3.00**¹

ISAT 420. Environmental Analysis and Modeling **Credits: 3.00**

MATH 268. Data Analysis and Visualization **Credits: 3.00**¹

Other Course Options: 0-2 Credit Hours

Students who have not fulfilled the 18 credit hours¹ with the above courses may fill the remaining credit hours with a course or research experience approved by the program director(s). Course content must include a focus on Earth's climate system at any scale, and may include intersections with society, individuals and/or natural systems. Examples of course options include but are not limited to the following.

GEOG 308. Environment, Nature and Society **Credits: 3.00**²

GEOG 415. Environment, Landscape and Culture **Credits: 3.00**²

GEOG 490. Senior Research or Field Practicum **Credits: 3.00**^{2,3}

GEOG 495. Internship in Geography **Credits: 3.00 - 6.00**³

GEOG 497. Independent Study **Credits: 3.00**³

GEOG 499 A, B, C. Honors in Geography **Credits: 1.00 - 3.00**³

ENVT 200. Environmental Systems Theory **Credits: 3.00**

ENVT 225. Environmental Advocacy and the Psychology of Change **Credits: 3.00**

GEOL 398. Topics in Geology **Credits: 1.00 - 4.00**³

GEOL 491. Geological Literature and Research **Credits: 2.00**^{2,3}

GEOL 497. Problems in Geology **Credits: 1.00 - 3.00**^{2,3}

GEOL 499A. Honors in Geology **Credits: 1.00**²

GEOL 499B. Honors in Geology **Credits: 2.00**³

GEOL 499C. Honors in Geology **Credits: 3.00**³

ISAT 490. Capstone Experience I **Credits: 1.00**³

ISAT 491. Senior Capstone Project I **Credits: 1.00**³

ISAT 499A. Senior Honors Thesis I **Credits: 1.00**³

ISAT 499B. Senior Honors Thesis II **Credits: 1.00**³

ISAT 499C. Senior Honors Thesis III **Credits: 2.00**³

Footnotes

¹ Students who have met the 18 credit hour requirement for the minor should speak to their adviser about the possibility of having the "Other Course Option" waived.

² These courses have prerequisites listed.

³ These courses require director approval.

Total: 18 Credit Hours

Creative Writing Minor

Erica Cavanagh, **Coordinator**

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The cross disciplinary minor in creative writing is designed to encourage students to develop their writing talents across a number of literary forms and communication contexts.

Course offerings in poetry, fiction, creative nonfiction, scriptwriting, screen and playwriting give students the opportunity to shape the minor to suit a variety of artistic interests and professional objectives. With the choice of at least one course from a group involving advanced topics, narrative and poetic forms, media criticism and film analysis, students will gain informed perspectives on current issues affecting readers, viewers, writers and their creative works. These courses support the core workshop courses and are vital to competence in the field.

The minimum requirement for a minor in creative writing is 18 hours. Two courses may be double-counted between the minor and the major. Students electing this minor may acquire more information from the creative writing adviser of the Department of English, the School of Media Arts and Design or the School of Theatre and Dance.

Required Courses

Select four or five core courses from two or more departments: 12-15 Credit Hours

ENG 391. Introduction to Creative Writing – Nonfiction **Credits: 3.00**

ENG 392. Introduction to Creative Writing – Poetry **Credits: 3.00**

ENG 393. Introduction to Creative Writing – Fiction **Credits: 3.00**

ENG 493. Advanced Creative Nonfiction **Credits: 3.00**

ENG 494. Advanced Poetry Writing **Credits: 3.00**

ENG 495. Advanced Fiction Writing **Credits: 3.00**

SMAD 250. Scriptwriting **Credits: 3.00**

SMAD 251. Screenplay Writing **Credits: 3.00**

SMAD 311. Feature Writing **Credits: 3.00**

SMAD 340. Advanced Screenplay Writing **Credits: 3.00**

SMAD 498. Senior Seminar in Media Arts and Design **Credits: 3.00** (when topic is appropriate)¹

THEA 347. Playwriting **Credits: 3.00**

THEA 441. Senior Seminar in Theatre **Credits: 3.00** (when topic is appropriate)¹

THEA 447. Advanced Playwriting **Credits: 3.00**

Select one or two support courses from the following: 3-6 Credit Hours

ENG 390. The Environmental Imagination **Credits: 3.00**

ENG 483. Narrative Form **Credits: 3.00**

ENG 484. Poetic Craft and Creativity **Credits: 3.00**

ENG 496. Advanced Topics in Creative Writing **Credits: 3.00**

SMAD 373. Media Analysis and Criticism **Credits: 3.00**

SMAD 463. Film Adaptations **Credits: 3.00**

THEA 481. Theory and Performance Studies **Credits: 3.00**

Total: 18 Credit Hours

¹ Students must check with the professor or creative writing coordinator to see if these courses are appropriate for this minor.

Criminal Justice Minor

Benjamin Meade, **Coordinator**

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The cross disciplinary minor in criminal justice is designed for students who are preparing for careers in law enforcement, corrections, judicial administration or other areas related to the study or management of crime, either directly upon graduation or after further graduate training. The requirement for a minor in criminal justice is 18 credits. Students should allow a minimum of four semesters in which to complete the minor. Students majoring in justice studies may not declare the criminal justice minor.

Required Courses

CRJU 300. Ethics in Criminal Justice **Credits: 3.00**

JUST 210. Crime and Criminal Justice **Credits: 3.00**

or

CRJU 215. Introduction to Criminal Justice **Credits: 3.00**

Choose at least one course from each of the following units: 12 Credit Hours

Criminology and Criminal Behavior

JUST 212. Theories of Crime and Criminal Justice **Credits: 3.00**

JUST 307. Justice and Crime **Credits: 3.00**

JUST 309. Global Crime **Credits: 3.00**

JUST 311. Women, Crime and Criminal Justice **Credits: 3.00**

JUST 312. Mass and Serial Murder **Credits: 3.00**

JUST 316. Human Development and Crime **Credits: 3.00**

JUST 317. Victimization of Children **Credits: 3.00**

JUST 318. Sex Offenders **Credits: 3.00**

JUST 320. Organized Crime **Credits: 3.00**

JUST 322. Understanding Violence and Nonviolence **Credits: 3.00**

JUST 326. Victimology **Credits: 3.00**

JUST 361. Terrorism **Credits: 3.00**

PSYC 250. Introduction to Abnormal Psychology **Credits: 3.00**¹

or

PSYC 335. Abnormal Psychology **Credits: 3.00**¹

PSYC 316. Human Development and Crime **Credits: 3.00**¹

SOCI 304. Social Deviance **Credits: 3.00**

Criminal Justice Institutions

CRJU 335. Law Enforcement **Credits: 3.00**
 CRJU 337. Courts and the Judiciary **Credits: 3.00**
 CRJU 340. Administration of Justice **Credits: 3.00**
 JUST 324. Death Penalty **Credits: 3.00**
 JUST 330. Corrections **Credits: 3.00**
 JUST 345. Restorative Justice **Credits: 3.00**

Criminal Justice, Law and Procedure

CRJU 321. Criminalistics **Credits: 3.00**
 CRJU 328. Criminal Procedure **Credits: 3.00**
 CRJU 329. Criminal Investigation and Evidence **Credits: 3.00**
 JUST 323. Comparative Criminal Justice **Credits: 3.00**
 JUST 327. Criminal Law **Credits: 3.00**
 JUST 329. Perspectives on Law **Credits: 3.00**
 JUST 334. Media and Justice **Credits: 3.00**
 JUST 397. Legal Research and Information Literacy **Credits: 3.00**

The following courses may also be used for general elective credit

CRJU 301. Advanced Level Special Topics in Criminal Justice **Credits: 3.00**
 CRJU 401. Internship in Criminal Justice **Credits: 3.00**

Footnote

¹ Students majoring in this discipline may double count only one course as credit for the minor and that major.

Total: 18 Credit Hours

Disability Studies Minor

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The minor in disability studies engages students in an examination of the many ways disability is defined and constructed. Students will build knowledge of the political, rhetorical, social, educational, historical, legal and medical frameworks of disability through both classroom and experiential study in courses drawn from several disciplines. Students will examine the ways systems inhibit and promote full participation of people with disabilities, explore how communities define and reinforce norms, and understand disability as an inherent part of diversity and inclusivity.

The minor in disability studies is open to all undergraduate students at JMU. The introductory course DST 100 can be taken the same semester as core courses. More than one core course can be taken to count toward the overall credit requirement. No more than nine hours may be taken from a single discipline. No more than two courses may be double counted for a student's major/minor.

Required Course: 1 Credit Hour

DST 100. Introduction to Disability Studies **Credits: 1.00**

Choose one of the following core courses: 3 Credit Hours

JUST 385. Disability and Justice **Credits: 3.00**
 KIN 429. Special Topics in Adapted Physical Education **Credits: 3.00**
 WRTC 430. Contemporary Rhetorical Theory and Practice **Credits: 3.00** : Disability Rhetoric
 SCOM 343. Contemporary Rhetorical Theory and Practice **Credits: 3.00** : Disability Rhetoric
 SOCI 335. Disability and Society **Credits: 3.00**
 SOCI 375. Medical Sociology **Credits: 3.00**

Choose five of the following elective courses: 15 Credit Hours

ANTH 360. Medical Anthropology **Credits: 3.00**
 ANTH 395. Special Topics in Anthropology **Credits: 3.00** : Sex and the Social: The Cultural Politics of Reproduction
 STAD 322. Equity, Inclusion and Access in Education and Performance **Credits: 3.00**
 DANC 325. Dance in Community **Credits: 3.00**
 HIST 306. A History of the Body in the West **Credits: 3.00**
 HIST 476. Revolutionary Russia **Credits: 3.00**
 JUST 221. Social Justice Theories **Credits: 3.00**
 REL 371. Religion and Disability **Credits: 3.00**
 REL 372. Religion and Medicine, East and West **Credits: 3.00**
 SCOM 370. Introduction to Health Communication **Credits: 3.00**
 SOCI 304. Social Deviance **Credits: 3.00**
 SOCI 385. Madness and Society: The Sociology of Mental Health and Illness **Credits: 3.00**
 SRM 242. Sociology and Psychology of Sport and Recreation **Credits: 3.00**
 SRM 436. Facilities and Event Management **Credits: 3.00**

Total: 19 Credit Hours

Entrepreneurship Minor

Chris Roeder, **Coordinator**
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The entrepreneurship minor is designed to introduce students from any discipline to the knowledge, skills and mindset necessary for successful new venture creation. The minor is open to students in any major except management, which offers a track in innovation and entrepreneurship.

Students who successfully complete the entrepreneurship minor will develop the knowledge base and skills needed for new venture creation and management. They will be able to:

Understand entrepreneurship as a possible career path, its role in economic growth and opportunity, and its associated social benefits.

Recognize/identify entrepreneurial opportunities that fit the individual student. Includes self-analysis in the context of possible entrepreneurial activities and demonstration of the ability to identify and analyze the attractiveness of potential markets.

Develop a business model and create a business plan. This includes completing a clear and concise written plan that serves as a blueprint for creation of the proposed venture.

Apply relevant financial and business principles to assess the need for start-up capital, conduct break even analysis and identify cash flow needed for future growth.

Identify and evaluate various sources of funding.

Articulate an effective pitch to gain support from investors, suppliers, customers or potential employees.

Interact and collaborate with various stakeholders to develop and evaluate ideas, and grow those ideas to fruition.

Special Admission Requirements

Admission to the minor is competitive. To be considered for admission into the entrepreneurship minor students will need to submit an application packet to the entrepreneurship minor coordinator. Applications are accepted *from 10/1 - 10/18 in the fall, and from 3/2 - 3/20 in the spring*. An application is required and includes:

A completed application form.

An unofficial transcript.

Responses to essay questions on the applicant's entrepreneurial experience and goals.

Proof of good academic standing.

Students may request permission to count two three-credit electives from their major as their ENTP electives. These courses must be related to innovation and/or entrepreneurship, and they must be approved by the minor coordinator.

All electives must be approved by the coordinator, and students should check with an adviser or the coordinator for the most updated list of suggested electives, as the list can change.

Required Courses

MGT 310. Business Fundamentals for Entrepreneurs **Credits: 3.00**

or

COB 300A. Integrative Business: Management **Credits: 3.00**

MGT 320. Management of Innovation and Technology **Credits: 3.00**¹

MGT 471. Entrepreneurship and Small Business Management **Credits: 3.00**

MGT 472. New Venture Creation **Credits: 3.00**

Electives (choose two): (6 credit hours)

ACTG 244. Accounting for Non-Business Majors **Credits: 3.00**

ENGR 480. Advanced Projects in Engineering **Credits: 1.00 - 4.00**

ENGR 498. Advanced Topics in Engineering **Credits: 1.00-3.00** : Innovation²

ENGR 498. Advanced Topics in Engineering: Realization²

ENGR 498. Advanced Topics in Engineering: Innovation Exchange²

ENGR 498. Advanced Topics in Engineering: Social Entrepreneurship²

FIN 345. Finance Fundamentals for Non-Business Majors **Credits: 3.00**

ISAT 480. Topics in Integrated Science & Technology **Credits: 1.00 - 4.00**

MGT 340. International Management **Credits: 3.00**

MGT 365. Fundamentals of Human Resource Management **Credits: 3.00**

MKTG 380. Principles of Marketing **Credits: 3.00**

WRTC 340. Writing as Leading **Credits: 3.00**

Total: 18 credit hours

Footnotes

¹ Engineering students may substitute ENGR 221 for MGT 320.

² All ENGR courses are contingent on availability.

Environmental Humanities Minor

Katey Castellano, **Coordinator**

Phone: (540) 568-3753

Website: <https://www.jmu.edu/environment/humanities.shtml>

This minor allows students to articulate broad historical and cultural views of the complex interactions among humans and the natural and material environment. Students will analyze and produce expressive, creative work that illustrates the complexity of human interaction with the environment.

Students select 18 hours as distributed below. No more than three courses can come from a single academic unit in the total hours selected. Students may double-count two courses in the minor with their major. At the discretion of the minor coordinator, science courses may be substituted into the minor.

Humanities and the Environment

Choose four courses, no more than two from the same discipline: 12 Credit Hours

ARCD 330. Materials and Methods **Credits: 3.00**

ENG 221. Literature/Culture/Ideas [C2L] **Credits: 3.00** (for minor credit when topic is "Environmental Literature")

ENG 371. Literature and the Environment **Credits: 3.00**

ENG 390. The Environmental Imagination **Credits: 3.00**

ENVT 300. Topics in Environmental Humanities **Credits: 3.00**

ENVT 301. Internship in Environmental Humanities **Credits: 3.00**

ENVT 401. Studio or Independent Study in Environmental Humanities **Credits: 3.00**

GEOG 325. Environmental Ethics **Credits: 3.00**

HIST 304. Native Peoples of the United States **Credits: 3.00**¹

HIST 315. Global History of Sport **Credits: 3.00**

HIST 427. U.S. Environmental History **Credits: 3.00**

INDU 392. Topics in Industrial Design **Credits: 3.00** (for minor credit when topic is "Design and Sustainability")

REL 366. Religion, Animals and the Environment **Credits: 3.00**

or

ENVT 366. Religion, Animals and the Environment **Credits: 3.00**

SCOM 302. Third Wave Ecofeminism **Credits: 3.00**

or

WGSS 302. Third Wave Ecofeminism **Credits: 3.00**

SCOM 354. Environmental Communication and Advocacy **Credits: 3.00**

or

WRTC 326. Environmental Communication and Advocacy **Credits: 3.00**

WRTC 416. Rhetoric of Environmental Science and Technology **Credits: 3.00**

or

SCOM 465. Rhetoric of Environmental Science and Technology **Credits: 3.00**

Approved Special Topics Courses

Approved Internship Programs

Approved Study Abroad Programs

Humanities/Social Science Elective

Choose one: 3 Credit Hours

ANTH 300. The Anthropology of Food **Credits: 3.00**

ANTH 307. Climate, Culture and Change **Credits: 3.00**

ANTH 430. Primate Conservation Biology **Credits: 3.00**

ARTH 380. American Art to 1870 **Credits: 3.00** (for landscape, painting, nationalism)

ENG 325. Romantic Literature **Credits: 3.00**

ENG 363. Native American Literature **Credits: 3.00**

ENG 496. Advanced Topics in Creative Writing **Credits: 3.00** (Cavanagh's section)

HIST 326. How Cars Changed Everything **Credits: 3.00**

HIST 327. Makers, Users, Skeptics and Thieves: Americans and Their Technologies **Credits: 3.00**

HIST 405. Travel and Exploration **Credits: 3.00**

HIST 443. Modern American Technology and Culture **Credits: 3.00**

HIST 453. Patterns of Global History **Credits: 3.00**

HIST 469. A History of International Development in the Twentieth Century **Credits: 3.00**

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** "Global South Asia" only

HUMN 301. Introduction to Natural Disasters Response **Credits: 3.00**

ISAT 421. Environmental Policy & Regulation **Credits: 3.00**

PPA 484. Environmental Regulatory Policy and Politics **Credits: 3.00**

SOCI 311. Sociology of the Environment **Credits: 3.00**

SOCI 354. Social Inequality **Credits: 3.00**

SOCI 358. Sociology of Consumption **Credits: 3.00**

WRTC 342. Writing Place **Credits: 3.00**

WRTC 358. Writing About Science and Technology **Credits: 3.00**

Science Elective

General Education courses may double-count for the minor.

Choose one: 3 Credit Hours

ENVT 200. Environmental Systems Theory **Credits: 3.00**

GEOG 322. Agricultural Systems **Credits: 3.00**

GEOG 341. Wilderness Techniques **Credits: 3.00**

GEOL 102. Environment: Earth [C3NS] **Credits: 3.00**

GEOL 115. Earth Systems and Climate Change [C3NS] **Credits: 3.00**

GEOL 211. Introduction to Oceanography [C3NS] **Credits: 3.00**

HTH 352. Environmental Health **Credits: 3.00**

ISAT 100. Environmental and Energy Sustainability [C3PP] **Credits: 3.00**

ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**

NUTR 380. Global Nutrition **Credits: 3.00**

Total: 18 Credit Hours

¹ These four history courses are offered on a rotating basis. One will be offered each year. Each one contains substantial environmental material.

Environmental Information Systems Minor

Steven P. Frysinger, **Coordinator**

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The cross disciplinary minor in environmental information systems is designed for undergraduates interested in using computer and information management technology to solve environmental problems and improve environmental stewardship. Some examples of environmental information systems are database systems to track and report hazardous materials in factories, decision support systems to facilitate risk analysis and management, GIS-based natural resource inventory systems and automated business management systems to support and document environmental compliance.

The environmental information systems minor requires a minimum of 25 credit hours². Core courses are intended to ensure knowledge of the foundation disciplines. Electives should be chosen in consideration of the student's particular interests within the general field of environmental information systems; the coordinator may approve other elective courses. Students are advised to check prerequisites of listed courses.

Required Courses

Core Courses: 16 Credit Hours

CS 149. Introduction to Programming **Credits: 3.00**¹

ISAT 340. Database Design, Implementation and Management **Credits: 3.00**¹

ISAT 320. Fundamentals of Environmental Science and Technology I **Credits: 4.00**²

ISAT 321. Fundamentals of Environmental Science and Technology II **Credits: 3.00**

ISAT 426. Environmental Information Systems **Credits: 3.00**

Elective Courses: 9 Credit Hours

CS 159. Advanced Programming **Credits: 3.00**¹

CS 374. Database Systems **Credits: 3.00**

GEOG 215. Introduction to Geographic Information Science and Cartography **Credits: 3.00**

GEOG 366. Intermediate Geographic Information Science **Credits: 3.00**

GEOG 385. Principles of Remote Sensing **Credits: 3.00**

GEOG 466. GIS and Geographic Databases **Credits: 3.00**

ISAT 341. Machine Learning and Data Science **Credits: 3.00**

ISAT 420. Environmental Analysis and Modeling **Credits: 3.00**

ISAT 447. Interaction Design **Credits: 3.00**

Total: 25 Credit Hours

Footnotes

¹ Or equivalent by permission of director.

² Students who have successfully completed ISAT 320 prior to fall 2016 will receive 3 credits for ISAT 320; if that is the case, the environmental information systems minor requires a minimum of 24 credit hours.

Note:

ISAT 252 or CIS 221 substitute for CS 149; CIS 331 substitutes for CS 159; CS 374 substitutes for ISAT 340; CIS 330 substitutes for CS 374.

Environmental Management Minor

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The cross disciplinary environmental management minor prepares students to apply the principles of environmental science and engineering to contemporary

environmental problems in natural resource, industrial and public policy contexts. The minor is particularly suitable for students interested in professional careers in industrial environmental management, natural resources management, and environmental policy and planning.

The environmental management minor strives to develop graduates who can apply science and technology to a broad range of practical environmental problems in professional settings. Students are expected to be literate and competent in the sciences and mathematics underlying environmental problem solving.

The environmental management minor requires a total of 29-32 credits, including prerequisite courses. Prerequisite courses may be fulfilled as part of the student's major.

Prerequisite: 4 Credit Hours

BIO 250. Quantitative Ecology and Evolution **Credits: 3.00**
and

BIO 250L. Quantitative Ecology and Evolution Laboratory **Credits: 1.00**

Select one course from the following: 3-4 Credit Hours

ISAT 251. Topics in Applied Statistics in ISAT [C3QR] **Credits: 3.00**

MATH 220. Elementary Statistics [C3QR] **Credits: 3.00**

MATH 285. Data Analysis **Credits: 4.00**

MATH 307. Principles of Probability and Statistics **Credits: 3.00**

Required Courses: 22-24 Credit Hours

Students who have successfully completed ISAT 320 prior to fall 2016 will receive 3 credits for ISAT 320; if that is the case, the environmental management minor requires a total of 28-31 credits, including prerequisite courses.

ISAT 320. Fundamentals of Environmental Science and Technology I **Credits: 4.00**

ISAT 321. Fundamentals of Environmental Science and Technology II **Credits: 3.00**

CHEM 241. Organic Chemistry I **Credits: 3.00**

ENVT 400. Capstone Seminar in Environmental Problem Solving **Credits: 3.00**

Concentration (See descriptions below) **Credits: 9.00 - 11.00**

Total: 29-32 Credit Hours

Concentrations

Students completing the environmental management minor must concentrate in one of three areas: natural resources, industrial systems or environmental policy. Students should be aware that some of the listed courses may have additional prerequisites.

Natural Resources: 9-11 Credit Hours

ISAT 424. Natural Resource Management **Credits: 3.00**

Choose two of the following courses:

BIO 402. Forest Ecology **Credits: 4.00**

BIO 457. Biological Applications of Geographic Information Systems **Credits: 4.00**

BIO 459. Freshwater Ecology **Credits: 4.00**

CHEM 354. Environmental Chemistry Field Camp **Credits: 3.00**

CHEM 355. Geochemistry of Natural Waters **Credits: 3.00**

or

GEOL 355. Geochemistry of Natural Waters **Credits: 3.00**

GEOG 340. Biogeography **Credits: 3.00**

GEOG 341. Wilderness Techniques **Credits: 3.00**

GEOG 342. Management and Protection of Natural Resources **Credits: 3.00**

GEOG 343. Wildlife Management **Credits: 3.00**

GEOL 430. Environmental Soil Science (2, 2) **Credits: 3.00**

ISAT 420. Environmental Analysis and Modeling **Credits: 3.00**

ISAT 425. Environmental Hydrology **Credits: 3.00**

ISAT 429. Sustainability: An Ecological Perspective **Credits: 3.00**

Industrial Systems: 9 Credit Hours

ISAT 422. Industrial Environmental Management **Credits: 3.00**

Choose two of the following courses:

HTH 352. Environmental Health **Credits: 3.00**

HTH 450. Epidemiology **Credits: 3.00**

ISAT 423. Environmental Remediation **Credits: 3.00**

ISAT 427. Industrial Hygiene **Credits: 3.00**

ISAT 428. Industrial Ecology **Credits: 3.00**

Environmental Policy: 9-10 Credit Hours

ISAT 421. Environmental Policy & Regulation **Credits: 3.00**
and

ISAT 422. Industrial Environmental Management **Credits: 3.00**
or

ISAT 424. Natural Resource Management **Credits: 3.00**

Choose one of the following courses:

ECON 305. Environmental Economics **Credits: 3.00**

ECON 340. Economics of Natural Resources **Credits: 3.00**

GEOG 325. Environmental Ethics **Credits: 3.00**

GEOG 429. Sustainability: An Ecological Perspective **Credits: 3.00**
or

ISAT 429. Sustainability: An Ecological Perspective **Credits: 3.00**

HIST 427. U.S. Environmental History **Credits: 3.00**

ISAT 411. Energy Economics and Policy **Credits: 3.00**

ISAT 420. Environmental Analysis and Modeling **Credits: 3.00**

ISAT 423. Environmental Remediation **Credits: 3.00**

PPA 484. Environmental Regulatory Policy and Politics **Credits: 3.00**

SCOM 354. Environmental Communication and Advocacy **Credits: 3.00**

SOCI 311. Sociology of the Environment **Credits: 3.00**

Other courses may apply by permission of the coordinator.

Environmental Science Minor

Bruce A. Wiggins, **Coordinator**

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This minor is a cross disciplinary program that any student may elect. Students pursuing programs ranging from the physical, natural or social sciences to education, journalism or business could benefit from this broadly-based curriculum. The program draws from courses that focus on the application of scientific concepts and principles to the understanding of environmental problems and their solutions. The minor draws upon the expertise of faculty in the areas of biology, chemistry, geography, physics and integrated science and technology.

The environmental science minor:

Provides a scientific background to those students interested in environmental law, environmental economics and environmental sustainability.

Broadens the student's understanding of how sciences are linked to environmental questions.

Complements any major by focusing on courses related to environmental issues.

The minimum requirement for a minor in environmental science is 24 credit hours taken from the four groups outlined below. Students wishing to complete more than one of the environmental minors (environmental management, environmental science and environmental studies) may receive dual credit for the capstone course (ENVT 400), but may not receive dual credit for any other courses that might be shared by the minors. Pre-approved study abroad and/or internship experiences may be substituted for one or more of the courses listed below.

No more than two courses from a single subject area can count toward the completion of the environmental science minor.

International studies and special topics courses with appropriate content may be counted (prior approval by the environmental science minor coordinator required).

Courses

Group 1. Introduction to Environmental Science: 3-4 Credit Hours

Can be double-counted with General Education.

BIO 250. Quantitative Ecology and Evolution **Credits: 3.00 and**

BIO 250L. Quantitative Ecology and Evolution Laboratory **Credits: 1.00**

GEOG 210. Physical Geography (2, 2) **Credits: 4.00**

GEOL 102. Environment: Earth [C3NS] **Credits: 3.00**

GEOL 110. Physical Geology [C3NS] **Credits: 3.00**

GEOL 115. Earth Systems and Climate Change [C3NS] **Credits: 3.00**

ISAT 100. Environmental and Energy Sustainability [C3PP] **Credits: 3.00**

ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**

Group 2. Advanced Environmental Science courses: 15 Credit Hours

BIO 387. Environmental Microbiology **Credits: 3.00**

BIO 400. Geology and Ecology of the Bahamas **Credits: 3.00**

or

GEOL 400. Geology and Ecology of the Bahamas **Credits: 3.00**

BIO 402. Forest Ecology **Credits: 4.00**

BIO 418. Conservation Biology **Credits: 3.00**

BIO 452. Population Ecology **Credits: 4.00**

BIO 453. Microbial Ecology and Evolution **Credits: 3.00**

BIO 454. Introduction to Biometrics **Credits: 4.00**

BIO 457. Biological Applications of Geographic Information Systems **Credits: 4.00**

BIO 459. Freshwater Ecology **Credits: 4.00**

CHEM 353. Environmental Chemistry **Credits: 3.00**

CHEM 354. Environmental Chemistry Field Camp **Credits: 3.00**

CHEM 450. Nuclear and Radiation Chemistry **Credits: 3.00**

ENGR 411. Fundamentals of Sustainable Engineering and Design **Credits: 3.00**

ENGR 472. Environmental Engineering **Credits: 3.00**

ENGR 478. Water Resources Engineering **Credits: 3.00**

ENVT 200. Environmental Systems Theory **Credits: 3.00**

GEOG 215. Introduction to Geographic Information Science and Cartography **Credits: 3.00**

GEOG 216. Earth Observation and GPS **Credits: 3.00**

GEOG 290. Human-Environment Interactions **Credits: 3.00**

GEOG 310. Environmental Issues **Credits: 1.00 - 4.00**

GEOG 340. Biogeography **Credits: 3.00**

GEOG 365. Cartography and Geospatial Visualization **Credits: 3.00**

GEOG 385. Principles of Remote Sensing **Credits: 3.00**

GEOL 211. Introduction to Oceanography [C3NS] **Credits: 3.00**

GEOL 310 A - D. Environmental Impact **Credits: 2.00 - 3.00**

GEOL 320. Meteorology **Credits: 3.00**

GEOL 430. Environmental Soil Science (2, 2) **Credits: 3.00**

GEOL 355. Geochemistry of Natural Waters **Credits: 3.00**

or

CHEM 355. Geochemistry of Natural Waters **Credits: 3.00**

GEOL 377. Earth Surface Processes (2, 2) **Credits: 3.00**

GEOL 406. Paleoclimatology and Paleooceanography **Credits: 3.00**

GEOL 410. Engineering Geology (2, 2) **Credits: 3.00**

GEOL 460. Hydrogeology (2, 2) **Credits: 3.00**

ISAT 311. Role of Energy in Modern Society **Credits: 3.00**

ISAT 320. Fundamentals of Environmental Science and Technology I **Credits: 4.00**

ISAT 321. Fundamentals of Environmental Science and Technology II **Credits: 3.00**

ISAT 420. Environmental Analysis and Modeling **Credits: 3.00**

ISAT 423. Environmental Remediation **Credits: 3.00**

ISAT 425. Environmental Hydrology **Credits: 3.00**

ISAT 427. Industrial Hygiene **Credits: 3.00**

ISAT 428. Industrial Ecology **Credits: 3.00**

MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**

MATH 322. Applied Linear Regression **Credits: 3.00**

MATH 324. Applied Nonparametric Statistics **Credits: 3.00**

MATH 328. Time Series Analysis **Credits: 3.00**

MATH 421. Applied Multivariate Statistical Analysis **Credits: 3.00**

PHYS 215. Energy and the Environment [C3PP] **Credits: 3.00**

Group 3. Environmental Studies courses: 3 Credit Hours

One of the following courses:

ECON 305. Environmental Economics **Credits: 3.00**

ECON 340. Economics of Natural Resources **Credits: 3.00**

ENG 371. Literature and the Environment **Credits: 3.00**

ENG 390. The Environmental Imagination **Credits: 3.00**

GEOG 325. Environmental Ethics **Credits: 3.00**

HIST 427. U.S. Environmental History **Credits: 3.00**

ISAT 421. Environmental Policy & Regulation **Credits: 3.00**

ISAT 473. Local Agriculture and Farm Internships **Credits: 4.00**

PPA 484. Environmental Regulatory Policy and Politics **Credits: 3.00**

SCOM 354. Environmental Communication and Advocacy **Credits: 3.00**

or

WRTC 326. Environmental Communication and Advocacy **Credits: 3.00**

SOCI 311. Sociology of the Environment **Credits: 3.00**

WRTC 416. Rhetoric of Environmental Science and Technology **Credits: 3.00**

or

SCOM 465. Rhetoric of Environmental Science and Technology **Credits: 3.00**

Group 4. Capstone course

ENVT 400. Capstone Seminar in Environmental Problem Solving **Credits: 3.00**¹

Footnote

¹ All students must complete the capstone course ENVT 400. Students must have completed 15 hours of their environment minor in order to enroll in the capstone.

Total: 24-25 Credit Hours

Environmental Studies Minor

Rob Alexander, **Coordinator**

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The environmental studies minor provides a cross disciplinary education engaging socio-cultural, scientific and technical issues raised by the oft-conflicting needs and desires of globally interacting societies. Designed to complement any major, the goals of the environmental studies minor include:

To help undergraduates develop an awareness of the cultural, political and scientific aspects of the world's environmental problems.

To better prepare students for further study at the graduate or professional school level and careers in the expanding field of environmental professions.

Overview of Requirements

The minimum requirement for a minor in environmental studies is a minimum of 21 credit hours taken from the three categories: Introduction to Environment and Environmental Science Literacy, The Socio-Cultural Context of Environmental Studies and the Senior Seminar capstone course.

No more than two courses from a single subject (e.g., GEOG, GEOL, ANTH, ENG) may count toward completion of the minor. Students wishing to complete more than one of the environment minors (environmental management, environmental science and environmental studies) may receive dual credit for the capstone course (ENVT 400), but may not receive dual credit for any other courses that might be shared by the minors.

Courses

Introduction to Environment and Environmental Science Literacy

Fundamental to exploring the problems which emerge through the human/nature interaction is an understanding of core scientific concepts and processes that underlie natural systems. Therefore, minors will take an environmental science course that provides a broad survey of core concepts as well as an environmental science course that provides a targeted focus on an environmental science topic.

Introduction to Environment: 3-4 Credit Hours

All students seeking the minor must have one broad survey course on the human/nature relationship. Select one course from the following, which can be double-counted with General Education:

BIO 103. Contemporary Biology [C3NS] **Credits: 3.00**

BIO 250. Quantitative Ecology and Evolution **Credits: 3.00**

ENVT 200. Environmental Systems Theory **Credits: 3.00**

GEOG 210. Physical Geography (2, 2) **Credits: 4.00**

GEOL 102. Environment: Earth [C3NS] **Credits: 3.00**

GEOL 110. Physical Geology [C3NS] **Credits: 3.00**

GEOL 115. Earth Systems and Climate Change [C3NS] **Credits: 3.00**

GEOL 210. Applied Physical Geology [C3NS] **Credits: 3.00**

ISAT 100. Environmental and Energy Sustainability [C3PP] **Credits: 3.00**

ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP] **Credits: 4.00**

Environmental Science Literacy: 3-4 Credit Hours

The Environmental Literacy requirement ensures that Minors will have at least one course providing depth and focus on at least one environmental science topic. Select one course from the following, which can be double-counted with General Education:

BIO 457. Biological Applications of Geographic Information Systems **Credits: 4.00**

BIO 459. Freshwater Ecology **Credits: 4.00**

GEOG 327. Climatology **Credits: 3.00**

GEOL 211. Introduction to Oceanography [C3NS] **Credits: 3.00**

GEOL 230. Evolution of Earth (3, 2) **Credits: 4.00**

GEOL 310 A - D. Environmental Impact **Credits: 2.00 - 3.00**

GEOL 320. Meteorology **Credits: 3.00**

GEOL 430. Environmental Soil Science (2, 2) **Credits: 3.00**

ISAT 320. Fundamentals of Environmental Science and Technology I **Credits: 4.00**

PHYS 215. Energy and the Environment [C3PP] **Credits: 3.00**

GEOG 429. Sustainability: An Ecological Perspective **Credits: 3.00**

or

ISAT 429. Sustainability: An Ecological Perspective **Credits: 3.00**

The Socio-Cultural Context of Environmental Studies: 12 Credit Hours

The core of the Environmental Studies minor is exploring the human/nature relationship and the challenges emerging from it through multiple disciplinary lenses, resulting in a truly interdisciplinary environmental studies experience. Select four courses (a minimum of 12 credit hours) from the following. Only two courses with the same course subject may be taken.

ECON 305. Environmental Economics **Credits: 3.00**

ECON 340. Economics of Natural Resources **Credits: 3.00**

ENG 221. Literature/Culture/Ideas [C2L] **Credits: 3.00** (Lit, Nature, Env section only)

ENG 371. Literature and the Environment **Credits: 3.00**

ENG 390. The Environmental Imagination **Credits: 3.00**

GEOG 310. Environmental Issues **Credits: 1.00 - 4.00**

or

GEOL 310 A - D. Environmental Impact **Credits: 2.00 - 3.00**

GEOG 322. Agricultural Systems **Credits: 3.00**

GEOG 325. Environmental Ethics **Credits: 3.00**

GEOG 330. Weather, Climate and Society **Credits: 3.00**

GEOG 427. Water Resources of the World **Credits: 3.00**

HIST 427. U.S. Environmental History **Credits: 3.00**

ISAT 290. Introduction to Systems Thinking for Complex Problems **Credits: 3.00**
 ISAT 421. Environmental Policy & Regulation **Credits: 3.00**
 ISAT 474. Political Ecology **Credits: 3.00**
 PPA 484. Environmental Regulatory Policy and Politics **Credits: 3.00**
 PPA 485. Governance for Environmental Sustainability **Credits: 3.00**

SCOM 302. Third Wave Ecofeminism **Credits: 3.00**
 or

WGSS 302. Third Wave Ecofeminism **Credits: 3.00**

SCOM 354. Environmental Communication and Advocacy **Credits: 3.00**
 or

WRTC 326. Environmental Communication and Advocacy **Credits: 3.00**

SOCI 311. Sociology of the Environment **Credits: 3.00**

SOCI 357. Sociology of Disasters **Credits: 3.00**

WRTC 416. Rhetoric of Environmental Science and Technology **Credits: 3.00**
 or

SCOM 465. Rhetoric of Environmental Science and Technology **Credits: 3.00**

Approved special topics courses

Approved internship programs

Approved study abroad courses

Senior Seminar Capstone Course: 3 Credit Hours

The culminating experience for the environmental studies minor is the combined capstone, co-taught by two faculty members from different fields and joined by the environmental science and environmental management minors. With a small size, opportunities for experiential field trips and engagement with current environmental challenges, ENVT 400 creates an all hands on deck opportunity to demonstrate interdisciplinary competency in environmental studies and to make a difference with real environmental, sustainability, climate justice and resiliency problems.

ENVT 400. Capstone Seminar in Environmental Problem Solving **Credits: 3.00**

Total: 21-23 Credit Hours

Family Studies Minor

Terrence Fernsler, **Minor Adviser**

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The minor in family studies is designed for undergraduates seeking enhancement of their major, desiring to increase understanding of self and relationships, and seeking to make a positive contribution to society. The minor offers two focuses: Family ecology (FECO) and gerontology (GERO). Both focuses explore a range of family-related issues, family processes, policies, laws, services and the interrelationship of families and society. The minor will enhance majors in many fields including anthropology, early and middle education, health sciences, management, nursing, psychology, social work and sociology. The minor capstone requires students to make connections between their major field and family studies.

The family studies minor requires a minimum of 18 credit hours with no more than six credit hours in the student's major. Note that some courses have prerequisites that must be completed before enrollment. Some courses may be restricted to students enrolled in particular majors.

One introductory course is required: either FAM 133 or SOCI 374.

For FECO focus students, 12 other credit hours are required and must be selected from each of these areas: Families in society, family and intimate relationships, and human development in the family. An additional course must be selected from any of the three areas or from family studies electives.

A capstone course, FAM 400, is also required. At least four courses in the minor, including the introductory course, must be completed prior to enrolling in FAM 400.

Required Courses

Core Courses

Introductory Course: 3 Credit Hours

FAM 133. The Contemporary Family **Credits: 3.00**

SOCI 374. Sociology of Families **Credits: 3.00**

Frameworks and Focus Capstone Courses: 3 Credit Hours

FAM 400. Theory Survey **Credits: 1.00**

FAM 401. Issues and Applications **Credits: 2.00** ^{6,7}

or

IPE 490. Special Topics in Health and Human Services **Credits: 0.00 - 4.00** ^{6,8}

(Course topic: Caregivers Community Network)

(must be taken for 2.00 Credit Hours)

Family Ecology Focus

Families in Society

Choose one of the following: 3 Credit Hours

GERN 280. Social Gerontology **Credits: 3.00**

or

SOCI 280. Social Gerontology **Credits: 3.00**

HIST 320. Women in U.S. History **Credits: 3.00**

NSG 390. Impact of Chronic Illness **Credits: 3.00** ⁴

SOCI 303. Sociology of Death and Dying **Credits: 3.00** ¹

SOCI 337. Sociology of Gender **Credits: 3.00**

or

WGSS 337. Sociology of Gender **Credits: 3.00**

SOWK 338. Issues and Policies in Family Services **Credits: 3.00**

SOWK 342. Child Welfare Services **Credits: 3.00**

Family and Intimate Relationships

Choose three credits from the courses below: 3 Credit Hours

HTH 372. Human Sexuality **Credits: 3.00**

NSG 326. Care and Consideration for Children with Special Needs **Credits: 1.00**

PSYC 275. Psychology of Human Intimacy **Credits: 3.00**

PSYC 450. Psychology of Child Abuse and Neglect **Credits: 3.00** ¹

SCOM 440. Family Communication **Credits: 3.00** ²

SOWK 340. Violence in Families **Credits: 3.00** ¹

Human Development in the Family

Choose three credits from the courses below: 3 Credit Hours

EXED 306. Lifespan Issues for Individuals with Disabilities **Credits: 3.00**³

FAM 300. Child Development **Credits: 3.00**¹

NSG 319. Understanding Sexuality across the Health-Illness Continuum **Credits: 2.00**

PSYC 304. Death and Dying: Thanatology **Credits: 3.00**¹

PSYC 365. Developmental Psychology **Credits: 3.00**¹

PSYC 475. Psychology of Adulthood **Credits: 3.00**

SOWK 325. Parent-Child Relationships Across the Lifespan **Credits: 3.00**

or

FAM 325. Parent-Child Relationships Across the Lifespan **Credits: 3.00**

SOWK 387. Working with Teens **Credits: 3.00**

Additional Elective

Choose three credits from one of the three topic areas above or one of the following: 3 Credit Hours

FAM 375. Grant Writing for Agencies **Credits: 3.00**

FAM 386. Youth Empowerment Strategies (YES) **Credits: 3.00**

FAM 487. Special Topics in Family Studies **Credits: 3.00**

FAM 490. Special Studies in Family Studies **Credits: 3.00**

Gerontology Focus

Foundation Courses: 9 Credit Hours

GERN 280. Social Gerontology **Credits: 3.00**

or

SOCI 280. Social Gerontology **Credits: 3.00** (Health Services Administration majors may substitute HSA 290. Gerontology for Health Services Administration)

GERN 305. Programs and Services for the Elderly **Credits: 3.00**⁵

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**

Elective Course (Choose three credit hours from the following approved courses):

BIO 301. Introductory Neuroscience **Credits: 3.00**⁵

GERN 450. Palliative and Hospice Care: An Interdisciplinary Approach **Credits: 3.00**

GERN 487. Special Topics in Gerontology **Credits: 3.00**

GERN 490. Special Studies in Gerontology **Credits: 1.00 - 3.00**

HTH 378. The Use and Effects of Drugs **Credits: 3.00**⁵

HTH 471. Health Aspects of Gerontology **Credits: 3.00**

IPE 415. Ethical Decision-Making in Healthcare: an Interprofessional Approach **Credits: 1.00**

or

NSG 415. Ethical Decision-Making in Healthcare: an Interprofessional Approach **Credits: 1.00**

NSG 310. Helping Persons in Pain **Credits: 2.00**

NSG 322. Integrative Health Care **Credits: 2.00**

NSG 328. Life, Death, and the In-Between **Credits: 1.00**

NSG 391. Living Successfully with Chronic Illness **Credits: 3.00**

PSYC 304. Death and Dying: Thanatology **Credits: 3.00**⁵

SOWK 325. Parent-Child Relationships Across the Lifespan **Credits: 3.00**

or

FAM 325. Parent-Child Relationships Across the Lifespan **Credits: 3.00**

SOCI 303. Sociology of Death and Dying **Credits: 3.00**

SOWK 314. Rural Health: an Interprofessional Approach **Credits: 3.00**

or

HTH 314. Rural Health: An Interdisciplinary Approach **Credits: 3.00**

or

IPE 314. Rural Health: an Interprofessional Approach **Credits: 3.00**

Total: 18 Credit Hours

Footnotes

¹ Some courses in the minor have substantive overlap in focus and content. To ensure students gain a broad exposure to family functions and dynamics, some restrictions apply for overlapping courses. For the family ecology focus, students may take either: SOCI 303. Sociology of Death and Dying or PSYC 304. Death and Dying: Thanatology; PSYC 450. Psychology of Child Abuse and Neglect or SOWK 340. Violence in Families; PSYC 365. Developmental Psychology or FAM 300. Child Development

² SCOM majors and minors only.

³ Special education non-teaching and chronic illness concentration students only.

⁴ Access may be limited.

⁵ Course has one or more prerequisites.

⁶ GERN 495 may be substitute as a capstone course with special permission from the minor adviser.

⁷ Capstone course for the FECO focus.

⁸ Capstone course for the GERO focus.

Film Studies Minor

Kevin J. Reynolds, **Coordinator**

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The minor in film studies is designed for students who wish to extend their critical understanding of visual communication and narrative form by studying how movies tell stories, convey information and influence audiences. Because the program is cross disciplinary, it examines films as both art and entertainment, bringing together the literary traditions of English and the communication perspectives of media arts and design. Together, the aim is to explore cinema's pictorial "language," investigate its commercial consequences and evaluate its impact across cultures as a medium for enacting the human story.

Six credit hours may be double-counted between the minor and major.

Information is available from the film studies adviser of the School of Media Arts and Design or the Department of English.

Required Courses

ENG 380. Introduction to Film **Credits: 3.00**

or

SMAD 380. Introduction to Film **Credits: 3.00**

Select no fewer than five courses from the following: 15 Credit Hours

ENG 381. History of Film to 1960 **Credits: 3.00**
 ENG 382. History of Film Since 1960 **Credits: 3.00**
 ENG 383. Film Genre **Credits: 3.00**
 ENG 384. Film Authorship **Credits: 3.00**
 ENG 385. Special Topics in Film Study **Credits: 3.00**
 SMAD 371. Narrative Media Studies **Credits: 3.00**
 SMAD 460. Film and Society **Credits: 3.00**
 SMAD 461. Film as Art **Credits: 3.00**
 SMAD 462. Documentary in Film and Television **Credits: 3.00**
 SMAD 463. Film Adaptations **Credits: 3.00**
 SMAD 464. Contemporary American Film **Credits: 3.00**
 SMAD 498. Senior Seminar in Media Arts and Design **Credits: 3.00** (when topic is film)

Total: 18 Credit Hours

Global Supply Chain Management Minor

Mert Tokman, **Coordinator**

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Rebecca Simmons, **Coordinator**

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The global supply chain management minor is designed to provide a broad overview of the supply chain management and logistics functions in a global context. The minor is open to all COB, ISAT and ENGR majors.

The minor is comprised of two core courses (MGT 461. Introduction to Supply Chain Management and MKTG 462. International Logistics) and four electives that can be chosen from available classes in marketing, management, international business, integrated sciences and engineering.

Prerequisite:

COB 300C. Integrative Business: Operations **Credits: 3.00** (For COB Majors)

or

ISAT 211. Issues in Modern Production Systems **Credits: 3.00** (For CISE Majors)

Core Courses: 6 Credit Hours

(On campus or Study Abroad):

MGT 461. Introduction to Supply Chain Management **Credits: 3.00**

MKTG 462. International Logistics **Credits: 3.00**

Electives: 12 Credit Hours

Marketing Majors

Choose two: (6 Credit Hours)

MKTG 450. Business Marketing **Credits: 3.00**

MKTG 460. Global Marketing **Credits: 3.00**

MKTG 494. Marketing Internship **Credits: 3.00 - 6.00**

Choose two from: (6 Credit Hours)

ISAT 422. Industrial Environmental Management **Credits: 3.00**

ISAT 426. Environmental Information Systems **Credits: 3.00**

ISAT 427. Industrial Hygiene **Credits: 3.00**

ISAT 428. Industrial Ecology **Credits: 3.00**

ISAT 430. Materials and Manufacturing Processes **Credits: 3.00**

ISAT 431. Advanced Manufacturing Processes and Systems **Credits: 3.00**

ISAT 433. Foundations of Lean and Six Sigma **Credits: 3.00**

ISAT 434. Industrial Informatics **Credits: 3.00**

ISAT 435. Lean Six Sigma Applications **Credits: 3.00**

ISAT 437. Technological Innovation and Sustainable Design **Credits: 3.00**

Management Majors

Choose two: (6 Credit Hours)

MGT 325. Project Management **Credits: 3.00**

MGT 340. International Management **Credits: 3.00**

Choose two from: (6 Credit Hours)

ISAT 422. Industrial Environmental Management **Credits: 3.00**

ISAT 426. Environmental Information Systems **Credits: 3.00**

ISAT 427. Industrial Hygiene **Credits: 3.00**

ISAT 428. Industrial Ecology **Credits: 3.00**

ISAT 430. Materials and Manufacturing Processes **Credits: 3.00**

ISAT 431. Advanced Manufacturing Processes and Systems **Credits: 3.00**

ISAT 433. Foundations of Lean and Six Sigma **Credits: 3.00**

ISAT 434. Industrial Informatics **Credits: 3.00**

ISAT 435. Lean Six Sigma Applications **Credits: 3.00**

ISAT 437. Technological Innovation and Sustainable Design **Credits: 3.00**

International Business and other COB Majors

Choose two: (6 Credit Hours)

IB 494. International Business Internship **Credits: 3.00**

MGT 340. International Management **Credits: 3.00**

MKTG 460. Global Marketing **Credits: 3.00**

Choose two from: (6 Credit Hours)

ISAT 422. Industrial Environmental Management **Credits: 3.00**

ISAT 426. Environmental Information Systems **Credits: 3.00**

ISAT 427. Industrial Hygiene **Credits: 3.00**

ISAT 428. Industrial Ecology **Credits: 3.00**

ISAT 430. Materials and Manufacturing Processes **Credits: 3.00**

ISAT 431. Advanced Manufacturing Processes and Systems **Credits: 3.00**

ISAT 433. Foundations of Lean and Six Sigma **Credits: 3.00**

ISAT 434. Industrial Informatics **Credits: 3.00**

ISAT 435. Lean Six Sigma Applications **Credits: 3.00**

ISAT 437. Technological Innovation and Sustainable Design **Credits: 3.00**

Integrated Science and Technology Majors

ISAT 330. Sustainable Manufacturing Systems **Credits: 3.00**

ISAT 331. Cyber-Physical Industry **Credits: 3.00**

Choose two from: (6 Credit Hours)

ISAT 432. Materials Selection in Product Design **Credits: 3.00**

ISAT 433. Foundations of Lean and Six Sigma **Credits: 3.00**

ISAT 434. Industrial Informatics **Credits: 3.00**

ISAT 435. Lean Six Sigma Applications **Credits: 3.00**

ISAT 437. Technological Innovation and Sustainable Design **Credits: 3.00**

ISAT 341. Machine Learning and Data Science **Credits: 3.00**

or

ISAT 344. Intelligent Systems **Credits: 3.00**

(Integrated Science and Technology students may receive credit for either ISAT 341 or ISAT 344, but not both)

Engineering Majors

ENGR 221. Engineering Management I: Product Development and Entrepreneurial Engineering **Credits: 3.00**

ENGR 322. Engineering Management II: Engineering Project Management **Credits: 3.00**

Choose two from: (6 Credit Hours)

ENGR 411. Fundamentals of Sustainable Engineering and Design **Credits: 3.00**
ISAT 432. Materials Selection in Product Design **Credits: 3.00**
ISAT 433. Foundations of Lean and Six Sigma **Credits: 3.00**
ISAT 434. Industrial Informatics **Credits: 3.00**
ISAT 435. Lean Six Sigma Applications **Credits: 3.00**
ISAT 437. Technological Innovation and Sustainable Design **Credits: 3.00**
ISAT 330. Sustainable Manufacturing Systems **Credits: 3.00**
or
ISAT 331. Cyber-Physical Industry **Credits: 3.00**
(Engineering students may receive credit for either ISAT 330 or ISAT 331, but not both)
ISAT 341. Machine Learning and Data Science **Credits: 3.00**
or
ISAT 344. Intelligent Systems **Credits: 3.00**
(Engineering students may receive credit for either ISAT 341 or ISAT 344, but not both)

Total: 18 Credit Hours

Historical Archaeology Minor

Dennis B. Blanton, **Minor Adviser**

Phone: (540) 568-6171

Gabrielle M. Lanier, **Minor Adviser**

Phone: (540) 568-3615

The minor is designed for students interested in the sub-field of historical archaeology, a discipline that integrates the research interests and methods of archaeology and history. The minor is designed to complement existing majors in anthropology and history, and it may also be of interest to students in art history and public administration. While guided by the theoretical underpinnings of history and anthropology, the minor in historical archaeology is field- and research-oriented. Students enrolling in the program should anticipate courses that require significant effort outside of the classroom.

Two courses (six credits) may be double-counted between the minor and the student's major.

Required Courses

ANTH 331. Historical Archaeology **Credits: 3.00**
or

HIST 331. Historical Archaeology **Credits: 3.00**

ANTH 494. Field Techniques in Archaeology **Credits: 4.00 - 8.00**

HIST 396. History Beyond the Classroom: Public History **Credits: 3.00**
or

ARTH 396. History Beyond the Classroom: Public History **Credits: 3.00**

Capstone research course

The personalized capstone course can take place over one or two semesters and will require the student to work closely with a faculty adviser. The project will require the student to define a research topic, establish a theoretical and methodological base for the project, gather data, interpret the results and prepare an appropriate statement of findings.

ANTH 496. Research Thesis **Credits: 3.00**
or

HIST 496. Research Thesis **Credits: 3.00**

Choose three of the following: 9 Credit Hours

Of these, one course must be chosen from the history/anthropology options and one must be from the geology or geography options. ¹

ANTH 410. Spatial Analysis for Anthropologists **Credits: 4.00**

ANTH 455. Archaeology: Methods of Analysis and Interpretation **Credits: 4.00**

HIST 394. Introduction to Museum Work **Credits: 3.00**
or

ARTH 394. Introduction to Museum Work **Credits: 3.00**

HIST 492. History From Things: Material Culture **Credits: 3.00**
or

ANTH 492. History from Things: Material Culture **Credits: 3.00**
or

ARTH 492. History From Things: Material Culture **Credits: 3.00**

HIST 493. Historic Preservation **Credits: 3.00**
or

ARTH 493. Historic Preservation **Credits: 3.00**

GEOL 430. Environmental Soil Science (2, 2) **Credits: 3.00**

GEOL 442. Field Geophysics **Credits: 3.00**

Footnote

¹ Access to geology and geography courses is competitive and will require some computer experience.

Total: 22 Credit Hours

Anthropology Course Designations

Archaeology (A)

ANTH 197. Archaeology **Credits: 3.00**

ANTH 205. Buried Cities, Lost Tribes: The Rise and Fall of Early Human Societies [C2HQC] **Credits: 3.00**

ANTH 250. Anthropology of the American Southwest **Credits: 3.00**

ANTH 307. Climate, Culture and Change **Credits: 3.00**

ANTH 311. Archaeology of Virginia **Credits: 3.00**

ANTH 312. The Native Americans **Credits: 3.00**

ANTH 325. Aztec, Maya and Their Predecessors **Credits: 3.00**

ANTH 327. Ancient North American Civilizations **Credits: 3.00**

ANTH 331. Historical Archaeology **Credits: 3.00**

ANTH 366. Anthropology of War **Credits: 3.00**

ANTH 391. Study Abroad **Credits: 1.00 - 6.00**

ANTH 395. Special Topics in Anthropology **Credits: 3.00**

ANTH 410. Spatial Analysis for Anthropologists **Credits: 4.00**

ANTH 455. Archaeology: Methods of Analysis and Interpretation **Credits: 4.00**

ANTH 486. Internship in Anthropology **Credits: 1.00 - 6.00**

ANTH 490. Special Studies in Anthropology **Credits: 1.00 - 3.00**

ANTH 492. History from Things: Material Culture **Credits: 3.00**

ANTH 494. Field Techniques in Archaeology **Credits: 4.00 - 8.00**

ANTH 496. Research Thesis **Credits: 3.00**

ANTH 499. Honors Thesis **Credits: 6.00**

Biological Anthropology (B)

ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**

ANTH 315. Human Evolution **Credits: 3.00**

ANTH 316. Human Evolutionary Psychology **Credits: 3.00**

ANTH 317. Primate Evolutionary Ecology **Credits: 3.00**
 ANTH 318. The Evolution of Primate Sexuality and Reproduction **Credits: 3.00**
 ANTH 319. Human Osteology **Credits: 3.00**
 ANTH 352. Birth, Death, Sex: Exploring Demography **Credits: 3.00**
 ANTH 391. Study Abroad **Credits: 1.00 - 6.00**
 ANTH 395. Special Topics in Anthropology **Credits: 3.00**
 ANTH 410. Spatial Analysis for Anthropologists **Credits: 4.00**
 ANTH 415. Anthropological Genetics **Credits: 3.00**
 ANTH 430. Primate Conservation Biology **Credits: 3.00**
 ANTH 445. Methods and Research Perspectives in Biological Anthropology **Credits: 4.00**
 ANTH 486. Internship in Anthropology **Credits: 1.00 - 6.00**
 ANTH 490. Special Studies in Anthropology **Credits: 1.00 - 3.00**
 ANTH 499. Honors Thesis **Credits: 6.00**

Cultural Anthropology (C)

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**
 ANTH 265. Peoples and Cultures of Latin America and the Caribbean **Credits: 3.00**
 ANTH 280. Peoples and Cultures of Sub-Saharan Africa **Credits: 3.00**
 ANTH 295. People and Cultures of East Asia **Credits: 3.00**
 ANTH 300. The Anthropology of Food **Credits: 3.00**
 ANTH 305. Language and Culture **Credits: 3.00**
 ANTH 306. Japanese Society and Culture **Credits: 3.00**
 ANTH 323. Anthropology and Photography **Credits: 3.00**
 ANTH 324. Mindfulness and Anthropology **Credits: 3.00**
 ANTH 350. Magic, Witchcraft and Religion **Credits: 3.00**
 ANTH 352. Birth, Death, Sex: Exploring Demography **Credits: 3.00**
 ANTH 360. Medical Anthropology **Credits: 3.00**
 ANTH 364. U.S./Latin American Borders **Credits: 3.00**
 ANTH 366. Anthropology of War **Credits: 3.00**
 ANTH 368. Contemporary American Culture **Credits: 3.00**
 ANTH 370. Topics in the Anthropology of Gender **Credits: 3.00**
 ANTH 375. Anthropological Theory **Credits: 3.00**
 ANTH 376. Anthropology of Reproduction **Credits: 3.00**
 ANTH 377. Space/Culture/Power **Credits: 3.00**
 ANTH 388. Prisons, Punishment and the State **Credits: 3.00**
 ANTH 389. Ethnographic Experience in Dominica **Credits: 3.00**
 ANTH 390. Topics in Cultural Studies **Credits: 3.00**
 ANTH 391. Study Abroad **Credits: 1.00 - 6.00**
 ANTH 395. Special Topics in Anthropology **Credits: 3.00**
 ANTH 405. Topics in Linguistic Anthropology **Credits: 3.00**
 ANTH 410. Spatial Analysis for Anthropologists **Credits: 4.00**
 ANTH 411. Topics in Ethnographic Film **Credits: 3.00**
 ANTH 435. Ethnographic Genres and Methods **Credits: 4.00**
 ANTH 436. Afro-Latin America **Credits: 3.00**
 ANTH 486. Internship in Anthropology **Credits: 1.00 - 6.00**
 ANTH 490. Special Studies in Anthropology **Credits: 1.00 - 3.00**
 ANTH 499. Honors Thesis **Credits: 6.00**

Field Experience (F)

ANTH 391. Study Abroad **Credits: 1.00 - 6.00**
 ANTH 435. Ethnographic Genres and Methods **Credits: 4.00**
 ANTH 455. Archaeology: Methods of Analysis and Interpretation **Credits: 4.00**
 ANTH 494. Field Techniques in Archaeology **Credits: 4.00 - 8.00**

Required for All Anthropology Majors (R)

ANTH 195. Cultural Anthropology [C4GE] **Credits: 3.00**

ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**
 ANTH 197. Archaeology **Credits: 3.00**
 ANTH 201. The Discipline of Anthropology **Credits: 1.00**
 ANTH 375. Anthropological Theory **Credits: 3.00**

Writing Intensive (W)

ANTH 375. Anthropological Theory **Credits: 3.00**

Humanitarian Affairs Minor

Tara Parsons, **Coordinator**

Phone: (540) 568-7645

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The cross disciplinary humanitarian affairs minor provides students with a global perspective on the major humanitarian crises facing the human community today. Students will investigate the impacts of natural disasters, disease, hunger and famine, poverty, conflict, and national and international policies on the welfare of human communities around the world. They will also explore solutions to various humanitarian crises and evaluate the problems of practicing humanitarianism in the world today. Students will become acquainted with the organizations that address these crises and the challenges they face. Finally, students will acquire knowledge and skills that prepare them for careers in governmental and non-governmental organizations that address humanitarian issues. The minor in humanitarian studies is open to all undergraduate students at JMU.

Core Requirements

HUMN 201. Introduction to Humanitarian Affairs **Credits: 3.00**

Choose five of the following

With no more than two from any single discipline:

HUMN 301. Introduction to Natural Disasters Response **Credits: 3.00**
 or

GEOG 301. Introduction to Natural Disasters Response **Credits: 3.00**

HUMN 302. Legal Issues in Humanitarian Affairs **Credits: 3.00**

HUMN 350. Special Topics in Humanitarian Affairs **Credits: 1.00 - 3.00**

HUMN 360. GIS for Humanitarian Assistance **Credits: 3.00**
 or

GEOG 360. GIS for Humanitarian Assistance **Credits: 3.00**

HUMN 490. Humanitarian Affairs Field Experience **Credits: 3.00**

ANTH 366. Anthropology of War **Credits: 3.00**

BIO 420. Medical Parasitology **Credits: 3.00**

ECON 270. International Economics **Credits: 3.00**

ENGR 471. Water in Africa **Credits: 3.00**

GEOG 280. Human Geography: The Cultural Landscape **Credits: 3.00**

GEOG 300. Population Geography **Credits: 3.00**

GEOG 322. Agricultural Systems **Credits: 3.00**

GEOG 323. The Geography of Human Genetics, Infectious Diseases and Diet **Credits: 3.00**

GEOG 335. Geography of Africa **Credits: 3.00**

GEOG 339. Geography of the Caribbean **Credits: 3.00**

GEOG 345. Geography of Poverty **Credits: 3.00**

GEOG 375. Political Geography **Credits: 3.00**

HTH 456. Grant Writing in Health Sciences **Credits: 3.00 (Summer Only)**

ISAT 459. Awareness and Understanding of Chemical, Biological, and Radiological Weapons of Mass Destruction **Credits: 3.00**

IA 460. All Hazards Response And Management Systems **Credits: 3.00**
 JUST 235. Justice in the Global Community **Credits: 3.00**
 JUST 341. Gender and Justice **Credits: 3.00**
 JUST 345. Restorative Justice **Credits: 3.00**
 JUST 351. Building Democracy **Credits: 3.00**
 JUST 352. Global Migration **Credits: 3.00**
 JUST 353. Justice and Development **Credits: 3.00**
 JUST 354. Native Justice and Resistance **Credits: 3.00**
 JUST 355. Solutions to Global Poverty **Credits: 3.00**
 JUST 356. Refugees and Humanitarian Response **Credits: 3.00**
 JUST 357. Environmental Justice **Credits: 3.00**
 JUST 372. Ethics and International Politics **Credits: 3.00**
 or
 POSC 372. Ethics and International Politics **Credits: 3.00**
 JUST 373. Rebuilding Post Conflict Societies **Credits: 3.00**
 JUST 392. Peace Studies **Credits: 3.00**
 or
 POSC 392. Peace Studies **Credits: 3.00**
 NPS 300. Introduction to Nonprofits **Credits: 3.00**
 NUTR 380. Global Nutrition **Credits: 3.00**
 POSC 200. Global Politics [C4GE] **Credits: 3.00**
 POSC 331. Human Rights in Theory and Practice **Credits: 3.00**
 or
 JUST 331. Human Rights in Theory and Practice **Credits: 3.00**
 POSC 340. Politics of Development **Credits: 3.00**
 POSC 347. Comparative Public Policy **Credits: 3.00**
 POSC 348. The Politics of Cultural Pluralism **Credits: 3.00**
 POSC 393. Human Security **Credits: 3.00**
 POSC 395. International Law **Credits: 3.00**
 POSC 396. International Organizations **Credits: 3.00**
 POSC 397. The Politics of International Economic Relations **Credits: 3.00**
 PSYC 460. Community Psychology Within Developing Societies **Credits: 3.00**
 SCOM 331. Communication and Conflict **Credits: 3.00**
 SCOM 332. Mediation **Credits: 3.00**
 SCOM 334. Alternative Dispute Resolution **Credits: 3.00**
 SOCI 348. Introduction to Developing Societies **Credits: 3.00**
 SOWK 375. Grant Writing for Agencies **Credits: 3.00**
 WRTC 314. Writing in the Public Sphere **Credits: 3.00**
 WRTC 484. Writing for Nonprofits **Credits: 3.00**
 WRTC 486. Writing in the Community **Credits: 3.00**

Footnote

¹ When used for credit in the humanitarian affairs minor, the international experience must be approved and supervised by the minor coordinator.

Total: 18 Credit Hours

Latin American, Latinx and Caribbean Studies Minor

Kristin Wylie, **Coordinator**

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Becca Howes-Mischel, **Adviser**

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This cross disciplinary minor helps students to acquire a deeper understanding of the histories, politics and cultures of Latin America, the Caribbean and Latinx communities in the U.S. The minor consists of 18 approved credit hours. Participants in the minor are strongly encouraged to pursue course work in foreign languages including Spanish, Portuguese and French, as well as to explore the possibility of studying in a Latin American or Caribbean country for a semester or summer session.

Courses

Students must select courses in at least three different disciplines, with no more than nine credits in any discipline (e.g., ANTH, HIST). Other special topics classes may be accepted via course directive. Consult the adviser for more information.

Complete two courses from among the following: 6 Credit Hours

ANTH 265. Peoples and Cultures of Latin America and the Caribbean **Credits: 3.00**
 HIST 313. The History of Latinos in the United States **Credits: 3.00**
 HUM 252. Global Cultures [C2HQC] **Credits: 3.00**¹
 LAXC 300. Topics in Latinx Studies **Credits: 3.00**²
 POSC 350. Latin American Politics **Credits: 3.00**
 SPAN 308. Latin American Cultures **Credits: 3.00**

Complete four additional courses from among the following: 12 Credit Hours

ANTH 265. Peoples and Cultures of Latin America and the Caribbean **Credits: 3.00**
 ANTH 325. Aztec, Maya and Their Predecessors **Credits: 3.00**
 ANTH 364. U.S./Latin American Borders **Credits: 3.00**
 ANTH 389. Ethnographic Experience in Dominica **Credits: 3.00**
 ANTH 391. Study Abroad **Credits: 1.00 - 6.00**³
 ANTH 395. Special Topics in Anthropology **Credits: 3.00**³
 ANTH 436. Afro-Latin America **Credits: 3.00**
 ANTH 490. Special Studies in Anthropology **Credits: 1.00 - 3.00**³
 ARTH 484. Art of the Americas **Credits: 3.00**
 ECON 270. International Economics **Credits: 3.00**
 ECON 312. Comparative Economic Systems **Credits: 3.00**
 ECON 365. Economic Development **Credits: 3.00**
 EDUC 310. Teaching in a Diverse Society **Credits: 3.00**
 ENG 360. Introduction to Ethnic American Literature **Credits: 3.00**³
 ENG 367. Latinx Literature **Credits: 3.00**
 GEOG 339. Geography of the Caribbean **Credits: 3.00**
 GEOG 490. Senior Research or Field Practicum **Credits: 3.00**³
 HIST 302. Plazas, Protests and Processions: An Urban History of the Americas **Credits: 3.00**
 HIST 307. The Trans-Atlantic Slave Trade **Credits: 3.00**
 HIST 313. The History of Latinos in the United States **Credits: 3.00**
 HIST 341. Selected Themes in World History **Credits: 3.00**³
 HIST 368. Blurred Borders: A Cultural History of the Caribbean, Latin America and the United States **Credits: 3.00**
 HIST 391. Travel Studies Seminar **Credits: 3.00**³
 HIST 390. Special Studies in History **Credits: 3.00**³

HIST 436. Afro-Latin America **Credits: 3.00**
HIST 437. Latin America and Latin Americans through Film: Focus on the Twentieth Century **Credits: 3.00**
HIST 444. Revolution and Social Change in Latin America **Credits: 3.00**
HIST 447. South America **Credits: 3.00**
HIST 448. Gender in Latin America and the Iberian World **Credits: 3.00**
HIST 489. Selected Topics in World History **Credits: 3.00**³
HON 200. Special Topics in Honors **Credits: 1.00 - 6.00**³
HON 300. Advanced Special Topics in Honors **Credits: 1.00 - 6.00**³
HUM 252. Global Cultures [C2HQC] **Credits: 3.00**¹
JUST 352. Global Migration **Credits: 3.00**
LAXC 299. Internship in Latin American, Latinx and Caribbean Studies **Credits: 1.00-3.00**
LAXC 300. Topics in Latinx Studies **Credits: 3.00**²
LAXC 375. Latina/o/x Politics: Origins and Futures **Credits: 3.00**
or
POSC 375. Latina/o/x Politics: Origins and Futures **Credits: 3.00**
LAXC 490. Independent Study in Latin American, Latinx and Caribbean Studies **Credits: 3.00**
LAXC 495. Special Topics in Latin American, Latinx and Caribbean Studies **Credits: 3.00**
POSC 350. Latin American Politics **Credits: 3.00**
POSC 366. Introduction to the Politics of Race and Ethnicity **Credits: 3.00**
POSC 371. Topics in Comparative Politics **Credits: 3.00**³
POSC 376. Introduction to Black Politics **Credits: 3.00**
POSC 377. Global Black Feminist Politics: On Power, Resistance and Transformation **Credits: 3.00**
POSC 378. Borderlands Policy: Latina/o/x Politics in Context **Credits: 3.00**
POSC 397. The Politics of International Economic Relations **Credits: 3.00**
REL 324. Latinx and Latin American Christianity **Credits: 3.00**
REL 450. Religion and Society **Credits: 3.00**³
SOCI 318. Sociology of Immigration **Credits: 3.00**
SOCI 391. Study Abroad **Credits: 1.00 - 6.00**
SOCI 490. Independent Study in Sociology **Credits: 1.00 - 3.00**³
SPAN 308. Latin American Cultures **Credits: 3.00**
SPAN 321. Oral and Written Communication (for Heritage Speakers) **Credits: 3.00**
SPAN 365. Spanish for Medical Professionals I **Credits: 3.00**
SPAN 375. Spanish for Medical Professionals II **Credits: 3.00**
SPAN 385. Latin American Short Story **Credits: 3.00**
SPAN 395. Latin American Poetry **Credits: 3.00**
SPAN 401. Hispanic/Latinx Cinema for Spanish Conversation **Credits: 3.00**
SPAN 404. Spanish in the United States **Credits: 3.00**
SPAN 415. Latin American Novel **Credits: 3.00**
SPAN 446. Special Topics in Spanish Literature **Credits: 3.00**³
SPAN 447. Special Topics in Spanish Culture **Credits: 3.00**³
SPAN 465. Cinema and Literature **Credits: 3.00**³
SPAN 476. Culture and Medicine in Latin America **Credits: 3.00**
SPAN 485. Business and Society in Latin America **Credits: 3.00**
SPAN 490. Special Studies in Spanish **Credits: 1.00 - 3.00**³
SPAN 492. Latinx Community Practicum **Credits: 3.00**

Total: 18 Credit Hours

Footnotes

¹ HUM 252. Global Cultures [C2HQC] Must be one of the following topics to count toward the core requirement: Latin American Cultures or Introduction to Latin American, Latinx and Caribbean Studies. Other sections (e.g., Brazilian

Culture) may count as an elective. HUM 252 counts as a history course unless taught by faculty from another discipline. Consult the LAXC adviser with questions.

² LAXC special topics course. Can be repeated once for credit if the topic changes. Only one will count toward the core requirement; the second will count toward required electives.

³ Special topics or special studies course. It may count for the minor, but only if it deals with Latin America or the Caribbean. Contact the adviser for approval.

Latino Community Engagement Minor

Karina Kline-Gabel, **Coordinator**

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The Latino Community Engagement minor invites Spanish-speaking students to engage with the local and regional Latinx community through a curriculum that requires community engagement and that emphasizes the immediacy of history and current events as they affect the Spanish speaking population. Students do not have to be FLLC majors in Spanish in order to elect this minor, but the majority of these courses will be taught in Spanish. Students will be able to select up to two courses in English from a diverse list of courses in topics critical to Latino and Spanish-speaking communities. Consult with the minor coordinator for assistance in evaluating skills for participation.

Required Courses: 9 Credit Hours

SPAN 300. Grammar and Communication **Credits: 3.00**

SPAN 320. Oral and Written Communication **Credits: 3.00**

or

SPAN 321. Oral and Written Communication (for Heritage Speakers) **Credits: 3.00**

SPAN 492. Latinx Community Practicum **Credits: 3.00**

Upper-Level Courses: 9 Credit Hours

Choose three upper-level courses in Latino topics from this list. At least one must be taught in Spanish.

No more than two courses can be double-counted with the student's major. Upper-level courses may be substituted, subject to prior approval from the minor coordinator.

HIST 313. The History of Latinos in the United States **Credits: 3.00**

JUST 328. Race, Class and Justice **Credits: 3.00**

JUST 343. Justice and Society **Credits: 3.00**

POSC 367. U.S. Immigration and Refugee Law **Credits: 3.00**

REL 324. Latinx and Latin American Christianity **Credits: 3.00**

SCOM 248. Intercultural Communication **Credits: 3.00**

SCOM 342. Argument and Advocacy **Credits: 3.00**

SCOM 471. Culture and Health Communication **Credits: 3.00**

SOCI 318. Sociology of Immigration **Credits: 3.00**

SOCI 336. Race and Ethnicity **Credits: 3.00**

SOCI 372. Sociology of the Community **Credits: 3.00**

SOWK 487. Special Topics **Credits: 3.00** (Social Work with Immigrants and Refugees)

SPAN 365. Spanish for Medical Professionals I **Credits: 3.00**

SPAN 370. Legal Spanish **Credits: 3.00**

SPAN 401. Hispanic/Latinx Cinema for Spanish Conversation **Credits: 3.00**

SPAN 404. Spanish in the United States **Credits: 3.00**

SPAN 436. Introduction to Interpretation **Credits: 3.00**

WRTC 318. Intercultural Professional Communication **Credits: 3.00**

WRTC 342. Writing Place **Credits: 3.00**

WRTC 486. Writing in the Community **Credits: 3.00**

Total: 18 Credit Hours

Legal Studies Minor

Melinda Adams, **Coordinator**

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An understanding of law is vital to an understanding of political, social and economic life and is an important element in becoming an "educated and enlightened citizen." The minor in legal studies offers an interdisciplinary program of study that will give students the opportunity to examine law from a variety of perspectives. The minor in legal studies is not a program in pre-professional legal training; it is designed to serve pre-law students at JMU as well as students who are interested in careers in government, health, technology, business or the non-profit sector. The minor focuses broadly on the skills needed to study the law (logical and ethical reasoning, critical thinking, strong writing, and close reading) as well as the philosophy, praxis and applications of the law writ large. As such, it can serve as a strong complement to many major fields of study or as an area of interest to those who think they may want to pursue law school or a legal career.

Program Goals:

To develop students' critical thinking, communication, and analytical skills

To introduce students to an interdisciplinary study of law from a variety of perspectives

To expand and enrich students' understanding of law and the multiple functions it plays in our national (and global) society

Required Core Course: 3 Credit Hours

Take one of the following logic courses:

PHIL 250. Introduction to Symbolic Logic **Credits: 3.00**

PHIL 315. Logic and Legal Reasoning **Credits: 3.00**

Electives: 15 Credit Hours

Choose five (5) elective courses beyond those used to fulfill the Logic requirement:

No more than nine credit hours (three courses) may be taken from a single discipline. Students should check with their major advisers regarding the ability to double count courses between the Legal Studies Minor and their major(s). Other courses outside of this list may be counted towards the minor with the approval of the minor coordinator(s). A maximum of two courses (six credit hours) can count in this way. Courses must be approved before the student enrolls.

CRJU 337. Courts and the Judiciary **Credits: 3.00**

ENG 221. Literature/Culture/Ideas [C2L] **Credits: 3.00** (*when topic is Law and Vengeance*)

ENG 302. Special Topics in Literature and Language **Credits: 3.00** (*when topic is Literature and Law*)

FL 430. Forensic Linguistics: Language and the Law **Credits: 3.00**

HIST 339. Selected Themes in U.S. History **Credits: 3.00** (*when topic appropriate*)

HIST 341. Selected Themes in World History **Credits: 3.00** (*when topic appropriate*)

JUST 300. Perspectives On Comparative Justice **Credits: 3.00**

JUST 301. Advanced Level Special Topics in Justice Studies **Credits: 3.00** (*when topic is Law and Society*)

JUST 323. Comparative Criminal Justice **Credits: 3.00**

JUST 327. Criminal Law **Credits: 3.00**

JUST 329. Perspectives on Law **Credits: 3.00**

JUST 386. Sexual Orientation, Law and Justice **Credits: 3.00**

JUST 397. Legal Research and Information Literacy **Credits: 3.00**

PHIL 250. Introduction to Symbolic Logic **Credits: 3.00**

PHIL 262. Problems in Applied Ethics **Credits: 3.00**

PHIL 267. Philosophy of Law **Credits: 3.00**

PHIL 300. Knowledge and Belief **Credits: 3.00**

PHIL 310. Symbolic Logic **Credits: 3.00**

PHIL 315. Logic and Legal Reasoning **Credits: 3.00**

PHIL 330. Moral Theory **Credits: 3.00**

PHIL 335. The Individual, the State, and Justice **Credits: 3.00**

POSC 325. Constitutional Law **Credits: 3.00**

POSC 326. Civil Rights **Credits: 3.00**

POSC 386. The U.S. Judiciary **Credits: 3.00**

POSC 387. The Appellate Process and Practice **Credits: 3.00**

REL 350. Islamic Law and Society **Credits: 3.00**

REL 383. The Global Refugee Crisis and Religion **Credits: 3.00**

SCOM 342. Argument and Advocacy **Credits: 3.00**

SCOM 346. Free Speech in America **Credits: 3.00**

SMAD 330. New Media Law **Credits: 3.00**¹ (*limited seat availability for minors*)

SMAD 370. Mass Communication Law **Credits: 3.00**¹ (*limited seat availability for minors*)

SMAD 450. Law of Media Arts and Design **Credits: 3.00**¹ (*limited seat availability for minors*)

WRTC 301. Language, Law and Ethics **Credits: 3.00**

WRTC 460. Legal Writing **Credits: 3.00**

Minor Total: 18 Credit Hours

Footnote

¹ SMAD 330 and SMAD 370 can count toward the Legal Studies minor with minor coordinator permission.

Linguistics Minor

Jennifer Lang-Rigal, **Coordinator**

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The interdisciplinary minor in linguistics offers courses founded on the core concepts of linguistics, methods of linguistic analysis, modern linguistic theories and the application of linguistics to other areas. The program is drawn from a variety of departments and colleges offering diverse courses whose approaches to linguistics range from theoretical linguistics, to anthropological linguistics, to Spanish linguistics and speech pathology. The purpose of this program is to provide the student with a fundamental understanding of human language and the different ways language impacts our lives. This program is relevant for students interested in a variety of professions, including but not limited to: language teaching, interpretation, translation, speech-language pathology and audiology, language policy and planning, language documentation and revitalization, and computer sciences/natural language processing. Students will develop their knowledge of their native and second languages through metalinguistic inquiry, consequently enriching their ability to

engage more broadly with the forms and functions of linguistic communication. The linguistics minor will encourage students to appreciate linguistic diversity, think about language-focused discrimination and recognize the importance of language in efforts to encourage diversity, equity, and inclusion.

Choose from the following courses:

Students must earn 18 credits from the following list. A maximum of 9 credits hours from a single discipline (e.g., ENG or SPAN) may be earned. One three-credit foreign language course of any level may be counted toward the minor by approval of the minor coordinator. These credits cannot also be counted toward the requirements for the Bachelor of Arts in Modern Foreign Languages. One other appropriate course not listed below may be considered for the minor upon consultation with the minor coordinator.

ANTH 305. Language and Culture **Credits: 3.00**

or

SCOM 305. Language and Culture **Credits: 3.00**

ANTH 405. Topics in Linguistic Anthropology **Credits: 3.00**

CSD 200. Introduction to Communication Disorders **Credits: 3.00**

ENG 301. Old English Language and Literature **Credits: 3.00**

ENG 303. History of the English Language **Credits: 3.00**

ENG 308. Introduction to Linguistics **Credits: 3.00**

ENG 310. Modern English Grammar **Credits: 3.00**

ENG 348. Studies in Linguistics and the English Language **Credits: 3.00**

ENG 417. Advanced Studies in Linguistics and the English Language **Credits: 3.00**

FL 410. Introduction to Romance Linguistics **Credits: 3.00**

FL 430. Forensic Linguistics: Language and the Law **Credits: 3.00**

PHIL 250. Introduction to Symbolic Logic **Credits: 3.00**

PHIL 380. Philosophy of Language **Credits: 3.00**

SCOM 245. Signs, Symbols and Social Interaction **Credits: 3.00**

SPAN 310. Introduction to Spanish Linguistics **Credits: 3.00**¹

SPAN 311. Contrastive Linguistics **Credits: 3.00**¹

SPAN 315. Spanish Phonetics **Credits: 3.00**¹

SPAN 404. Spanish in the United States **Credits: 3.00**¹

SPAN 435. Translation Strategies **Credits: 3.00**¹

SPAN 436. Introduction to Interpretation **Credits: 3.00**¹

SPAN 448. Special Topics in Spanish Linguistics **Credits: 3.00**¹

TESL 300. Introduction to Second Language Acquisition **Credits: 3.00**

Footnote

¹ SPAN courses are taught in Spanish and have a prerequisite of SPAN 300 or equivalent in a placement test.

Total: 18 Credit Hours

Logic and Reasoning Minor

Tracy A. Luper, **Coordinator**

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Thomas R. Adajian, **Coordinator**

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Email: adajiatr@jmu.edu

Logic and reasoning are central to human inquiry. The minor brings together several disciplines which take logic and reasoning as part of their subject

matter, emphasize the core logical elements that are common across disciplines and show how to apply these common logical concepts and tools in different domains. The requirement for a minor in logic and reasoning is 18-19 credits: 12-13 credit hours from a set of core courses and six credit hours from electives.

Required Courses

PHIL 250. Introduction to Symbolic Logic **Credits: 3.00**

PHIL 310. Symbolic Logic **Credits: 3.00**

Choose one of the following: 6-7 Credit Hours

MATH 235. Calculus I [C3QR] **Credits: 4.00**

and

MATH 245. Discrete Mathematics **Credits: 3.00**

or

MATH 227. Discrete Structures I **Credits: 3.00**

or

CS 227. Discrete Structures I **Credits: 3.00**

and

CS 327. Discrete Structures II **Credits: 3.00**

Elective Courses

Choose at least two of the following: 6 Credit Hours

CS 444. Artificial Intelligence **Credits: 3.00** (prerequisite CS 240)

MATH 424. Statistical Decision Theory **Credits: 3.00** (prerequisite MATH 318)

PHIL 315. Logic and Legal Reasoning **Credits: 3.00**

PHIL 320. Inductive Logic **Credits: 3.00**

PHIL 326. Introduction to Non-Standard Logics **Credits: 3.00**

PHIL 396. Philosophy of Physics **Credits: 3.00** (prerequisite PHIL 101)

PHIL 397. Philosophy of Space and Time **Credits: 3.00**

PHIL 398. Philosophy of Quantum Theory **Credits: 3.00**

PHIL 410. Philosophy of Science **Credits: 3.00**

Total: 18-19 Credit Hours

Materials Science Minor

Brycelyn Boardman, **Director**

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Location: 901 Carrier Drive, MSC 4502

Website: <https://www.jmu.edu/materialsscience>

Refer to the Materials Science Minor in Centers for Materials Science for more detailed information on this cross disciplinary program.

Minor Requirements

The minor in materials science includes four major components:

Choice of an entry-level introductory course in materials science.

Lecture or laboratory course that emphasizes more specialized areas in materials science.

Materials science electives that can include all specialized courses.

Research or an additional materials science lecture or laboratory experience.

Courses for the minor are offered through the departments of chemistry, geology and environmental studies, integrated science and technology, mathematics, and physics.

Courses

Materials Science Electives: *9 Credit Hours*

Research or additional materials science laboratory course: *3 Credit Hours*

Choose one of the following: 3 Credit Hours

MATS 375. An Introduction to Materials Science **Credits: 3.00**

or

PHYS 375. An Introduction to Materials Science **Credits: 3.00**

or

CHEM 375. An Introduction to Materials Science **Credits: 3.00**

or

ISAT 430. Materials and Manufacturing Processes **Credits: 3.00**

Choose one of the following: 3 Credit Hours

PHYS 381. Materials Characterization (Lecture/Lab) **Credits: 3.00**

ISAT 432. Materials Selection in Product Design **Credits: 3.00**

Total: 18 Credit Hours

Research in Materials Science

Register for Research in Materials Science under one of the following:

CHEM 497 (A, B, C) (in materials science, 2-4 credits)

GEOL 497. Problems in Geology (in materials science, 1-3 credits)

ISAT 491, ISAT 492, ISAT 493 Thesis (in materials science, 6 credits)

PHYS 498R. Undergraduate Research in Physics or Astronomy (in materials science, 2-4 credits)

MATS 498R. Undergraduate Materials Science Research (1-3 credits, repeatable to 6 credits)

Material Science Elective Courses

GEOL 280. Mineralogy (3, 2) **Credits: 4.00**

GEOL 300. Introduction to Petrology (3, 3) **Credits: 4.00**

ENGR 314. Materials and Mechanics **Credits: 4.00**

PHYS 337. Solid State Physics **Credits: 3.00**

PHYS 381. Materials Characterization (Lecture/Lab) **Credits: 3.00** (Lecture/Lab)

PHYS 380. Thermodynamics and Statistical Mechanics **Credits: 3.00**

CHEM 331. Physical Chemistry I **Credits: 3.00**

ISAT 432. Materials Selection in Product Design **Credits: 3.00**

CHEM 445. Polymer Chemistry **Credits: 3.00**

CHEM 485. Science of the Small **Credits: 4.00**

or

PHYS 485. Science of the Small **Credits: 4.00**

Special topics in materials science registered under:

CHEM 480. Selected Topics in Chemistry **Credits: 1.00 - 4.00** (materials science)

GEOL 398. Topics in Geology **Credits: 1.00 - 4.00** (materials science)

ISAT 480. Topics in Integrated Science & Technology **Credits: 1.00 - 4.00** (i.e., light metals)

MATS 498R. Undergraduate Materials Science Research **Credits: 1.00 - 3.00**

PHYS 497. Topics in Physics **Credits: 1.00 - 4.00** (materials science)

Medical Humanities Minor

Michael J. Klein, **Coordinator**

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Website: <http://www.jmu.edu/medical-humanities>

The cross disciplinary minor in medical humanities provides students with a humanistic and social study of illness, health and the body. Typically, we approach the human body from a medical, diagnostic model. But physicians have long recognized that this approach to health and well-being is not sufficient for understanding our somatic life. Drawing upon concepts found in the disciplines contributing to the minor, courses in the curriculum share the common focus of examining how individuals and institutions articulate and disseminate conceptions of the body, including constituent issues such as race, ethnicity, sexuality and gender.

Students select a minimum of 18 credit hours taken from a list of approved courses. No more than six credits from a single subject (e.g. ANTH, ENG, SCOM, SOCI) can count toward the minor.

Required Courses

Choose six courses from the following:

ANTH 352. Birth, Death, Sex: Exploring Demography **Credits: 3.00**

or

SOCI 352. Birth, Death, Sex: Exploring Demography **Credits: 3.00**

ANTH 360. Medical Anthropology **Credits: 3.00**

ANTH 376. Anthropology of Reproduction **Credits: 3.00**

ENG 360. Introduction to Ethnic American Literature **Credits: 3.00**

ENG 368. Women's Literature **Credits: 3.00**

or

WGSS 368. Women's Literature **Credits: 3.00**

ENG 369. Feminist Literary Theory **Credits: 3.00**

or

WGSS 369. Feminist Literary Theory **Credits: 3.00**

ENG 370. Queer Literature **Credits: 3.00**

or

WGSS 370. Queer Literature **Credits: 3.00**

ENG 423. Advanced Studies in Gender and Sexuality in Literature **Credits: 3.00**

ENG 466. Advanced Studies in Women's Literature **Credits: 3.00**

or

WGSS 466. Advanced Studies in Women's Literature **Credits: 3.00**

GEOG 323. The Geography of Human Genetics, Infectious Diseases and Diet **Credits: 3.00**

HTH 372. Human Sexuality **Credits: 3.00**

HIST 306. A History of the Body in the West **Credits: 3.00**

HIST 319. Women at Work in U.S. History **Credits: 3.00**

HIST 320. Women in U.S. History **Credits: 3.00**

HIST 321. Gender and Sexuality in Modern Europe **Credits: 3.00**

HIST 448. Gender in Latin America and the Iberian World **Credits: 3.00**

IPE 415. Ethical Decision-Making in Healthcare: an Interprofessional Approach **Credits: 1.00**

ISAT 456. Ethical, Legal and Social Implications of Biotechnology **Credits: 3.00**

ISAT 485. Gender Issues in Science **Credits: 3.00**
or
WGSS 485. Gender Issues in Science **Credits: 3.00**
PHIL 262. Problems in Applied Ethics **Credits: 3.00**

PHIL 350. The Philosophy of Feminism **Credits: 3.00**
or
WGSS 350. The Philosophy of Feminism **Credits: 3.00**

PSYC 308. Health Psychology **Credits: 3.00**
REL 280. Religion and Science **Credits: 3.00**
REL 315. Women and Religion **Credits: 3.00**
REL 371. Religion and Disability **Credits: 3.00**
REL 372. Religion and Medicine, East and West **Credits: 3.00**
SCOM 303. Special Topics in Health Communication **Credits: 3.00**

SCOM 348. Communication and Gender **Credits: 3.00**
or
WGSS 348. Communication and Gender **Credits: 3.00**

SCOM 468. Patient-Provider Communication **Credits: 3.00**
SCOM 471. Culture and Health Communication **Credits: 3.00**
SOCI 336. Race and Ethnicity **Credits: 3.00**
SOCI 337. Sociology of Gender **Credits: 3.00**
or
WGSS 337. Sociology of Gender **Credits: 3.00**
SOCI 375. Medical Sociology **Credits: 3.00**
SOCI 385. Madness and Society: The Sociology of Mental Health and Illness **Credits: 3.00**

WRTC 420. Feminist Rhetorics **Credits: 3.00**
or
WGSS 420. Feminist Rhetorics **Credits: 3.00**
or
SCOM 420. Feminist Rhetorics **Credits: 3.00**

WRTC 458. Scientific and Medical Communication **Credits: 3.00**
WRTC 488. Writing in the Health Sciences **Credits: 3.00**

Total: 18 Credit Hours

Medieval and Renaissance Studies Minor

Mary K. Gayne, **Coordinator**

Phone: (540) 568-6172

Email: gaynemk@jmu.edu

Website: <http://www.jmu.edu/medren>

This minor focuses on the period from the fall of Rome (5th century C.E.) to 1700. The minor allows students to take courses in art history, English, history, music, philosophy, political science, religion and some languages, including medieval languages such as Old English and Middle English in the original or in translation, and elementary and intermediate courses in Arabic, Greek and Latin. Other languages may also be counted for credit with the approval of the instructor. Introductory (i.e., 100 and 200 level) modern language courses are not permitted for credit.

The minor requires 18 credits total from the list below, with the following restrictions. The 18 credit hours must include courses from at least three

distinct disciplines. Note that all foreign language courses (ARAB, FR, GER, ITAL and LAT) fall into the single discipline of foreign languages and literatures. At least four of the six required classes must be 300 or 400 level classes. It is recommended that students take one introductory course before taking advanced classes.

Other courses with significant Medieval and/or Renaissance content may be counted toward the minor with the approval of the coordinator. In addition, students interested in pursuing a three-credit hour focused individual research project should contact individual faculty members with whom they might wish to work to determine the suitability of this option in their particular cases. Only one such independent study will count toward the minor.

Approval of the minor coordinator will also be required in the following two cases. First, courses with an asterisk will count toward the minor only if their content is focused on the Medieval and/or Renaissance periods. Second, because the content of HUM 200, HUM 250 and HUM 252 may vary, the minor coordinator will determine the appropriate disciplinary category for these courses.

Required Courses

*Courses with an asterisk will count toward the minor only if their content is focused on the Medieval and/or Renaissance periods.

Introductory: 6 Credit Hours

Only two introductory courses may be counted toward the minor.

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA] **Credits: 3.00**
ENG 235. Survey of English Literature: From Beowulf to the Eighteenth Century [C2L] **Credits: 3.00**
HIST 101. World History to 1500 [C2HQC] **Credits: 3.00**
HUM 200. Great Works [C2L] **Credits: 3.00 ***
HUM 250. Foundations of Western Culture [C2HQC] **Credits: 3.00 ***
HUM 252. Global Cultures [C2HQC] **Credits: 3.00 ***
REL 250. Islamic Religious Traditions **Credits: 3.00**

Advanced: 12 Credit Hours

At least four courses must be 300 or 400 level.

ARTH 313. Masterpieces of Italian Renaissance Art **Credits: 3.00**
ARTH 426. Advanced Topics in Cross-Cultural Art **Credits: 3.00-9.00 *** (*Only 3.00 credit hours toward the minor.*)
ARTH 427. Advanced Topics in Pre-Modern Art **Credits: 3.00 ***
ARTH 446. Renaissance Art and the East **Credits: 3.00**
ARTH 448. Studies in Leonardo and Michelangelo **Credits: 3.00**
ENG 302. Special Topics in Literature and Language **Credits: 3.00 ***
ENG 306. The Bible as Literature **Credits: 3.00 ***
ENG 311. Medieval Literature and Culture **Credits: 3.00**
ENG 313. Studies in Early Modern Literature and Culture **Credits: 3.00**
ENG 316. Early Modern Drama **Credits: 3.00**
ENG 317. Studies in Shakespeare **Credits: 3.00**
ENG 320L. Shakespeare on the Page and Stage in London **Credits: 3.00**
ENG 401. Advanced Studies in Medieval Literature **Credits: 3.00**
ENG 402. Advanced Studies in British Literature Before 1700 **Credits: 3.00**
ENG 410. Advanced Studies in Author **Credits: 3.00 ***
ENG 412. Special Topic Seminar **Credits: 3.00 ***
ENG 415. Advanced Studies in Textuality and the History of the Book **Credits: 3.00 ***
FR 446. Special Topics in Francophone Literature **Credits: 3.00 ***

GER 307. History of German Culture and Society **Credits: 3.00 ***
 GER 436. Studies in German Literature **Credits: 3.00 ***
 HIST 305. History of Science and Christianity **Credits: 3.00**
 HIST 352. The Premodern Middle East: Themes and Intersections **Credits: 3.00**
 HIST 373. History of the Ottoman Empire, 1453-1922 **Credits: 3.00**
 HIST 401. Research Capstone Topics **Credits: 3.00 ***
 HIST 473. Early Modern Islamic Empires **Credits: 3.00**
 HIST 482. French History Seminar **Credits: 3.00 ***
 ITAL 307. History of Italian Culture and Society **Credits: 3.00 ***
 ITAL 437. Studies in Italian Literature **Credits: 3.00 ***

or

ENG 437. Studies in Italian Literature **Credits: 3.00 ***
 POSC 311. The Ideas and Legacies of Medieval and Renaissance Political Theory **Credits: 3.00**
 PHIL 460. Topics in Classical Philosophy **Credits: 3.00 ***
 PHIL 342. Medieval Philosophy **Credits: 3.00**
 REL 304. Art, Religion and Identity in Medieval Sicily **Credits: 3.00**
 REL 306. Gender and Sexuality in Islam **Credits: 3.00 ***
 REL 307. Knowledge and Identity in Islam **Credits: 3.00 ***
 REL 339. Islamic Philosophy **Credits: 3.00**

or

PHIL 339. Islamic Philosophy **Credits: 3.00**

Total: 18 Credit Hours

Middle Eastern Communities and Migrations *Minor*

Shah Mahmoud Hanifi, **Coordinator**

Phone: (540) 568-1743

Email: hanifism@jmu.edu

Website: <http://www.jmu.edu/mecm>

This minor concentrates on social and political issues involving Muslim, Christian and Jewish populations in their own right and in relation to one another in the territory between the Nile and Indus rivers during the modern period. The program is also designed to accommodate consideration of other communities including Hindu and other South Asians, Anatolian and Central Asian Turks, and Mediterranean peoples in the larger area stretching from North Africa to Southeast Asia as well as Middle Eastern diaspora communities in Europe and the Americas from the ancient period to the present.

The cross disciplinary orientation of the program emphasizes comparison and a synthesis of local, regional, trans-national and global perspectives. The program provides an intellectual foundation that can be usefully applied and built upon in graduate school, the private sector or government service.

Students are required to take 18 credits comprised of six credits of core course work and 12 credits of electives. Students may take no more than nine credits from a single academic unit.

Additional Information

The College of Arts and Letters departments offer a number of courses listed generically, usually at the 300- and 400-level (including disciplinary capstone and methodology courses, often numbered 395) that can also count toward the MECM minor under certain circumstances.

Core Courses

Choose two: 6 Credit Hours

REL 250. Islamic Religious Traditions **Credits: 3.00**
 HIST 352. The Premodern Middle East: Themes and Intersections **Credits: 3.00**
 HIST 353. International and Multicultural Histories of the Modern Middle East **Credits: 3.00**

Choose any of the following to fulfill the remaining 12 credits:

Regular Offerings

Department of Foreign Languages, Literatures and Cultures

ARAB 101. Elementary Arabic I **Credits: 4.00**
 ARAB 102. Elementary Arabic II **Credits: 4.00**
 ARAB 111. Intensive Arabic I **Credits: 6.00**
 ARAB 212. Intensive Arabic II **Credits: 6.00**
 ARAB 231. Intermediate Arabic I **Credits: 3.00**
 ARAB 232. Intermediate Arabic II **Credits: 3.00**
 FL 490. Special Studies in Foreign Languages **Credits: 1.00 - 4.00**
 HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (Turkey: Meeting of East and West)

PERS 101. Elementary Persian I **Credits: 3.00 - 4.00**
 PERS 102. Elementary Persian II **Credits: 3.00 - 4.00**
 PERS 231. Intermediate Persian I **Credits: 3.00**
 PERS 232. Intermediate Persian II **Credits: 3.00**

School of Art, Design and Art History

ARTH 332. Islamic Art and Architecture **Credits: 3.00**
 ARTH 424. Arts of Ancient Egypt **Credits: 3.00**
 ARTH 440. City of Jerusalem **Credits: 3.00**
 ARTH 446. Renaissance Art and the East **Credits: 3.00**

Department of Anthropology and Sociology

SOCI 342. Social Movements in the Middle East **Credits: 3.00**

Department of History

HIST 348. Maps and Mobility in Islamic World History **Credits: 3.00**
 HIST 351. War in Afghanistan: Local and Global Perspectives **Credits: 3.00**
 HIST 352. The Premodern Middle East: Themes and Intersections **Credits: 3.00**
 HIST 353. International and Multicultural Histories of the Modern Middle East **Credits: 3.00**
 HIST 372. Afghanistan in Regional and Global Systems **Credits: 3.00**
 HIST 373. History of the Ottoman Empire, 1453-1922 **Credits: 3.00**
 HIST 473. Early Modern Islamic Empires **Credits: 3.00**
 HIST 485. Imperial Science and Colonial Knowledge in the Middle East and South Asia **Credits: 3.00**

Department of Philosophy and Religion

REL 201. Introduction to Hebrew Bible/Old Testament **Credits: 3.00**
 REL 202. Introduction to the New Testament **Credits: 3.00**
 REL 250. Islamic Religious Traditions **Credits: 3.00**
 REL 306. Gender and Sexuality in Islam **Credits: 3.00**
 REL 307. Knowledge and Identity in Islam **Credits: 3.00**
 REL 320. Judaism **Credits: 3.00**
 REL 383. The Global Refugee Crisis and Religion **Credits: 3.00**

Department of Political Science

POSC 354. Politics of the Middle East **Credits: 3.00**

Total: 18 Credit Hours

Additional Courses

The following three-credit courses are offered at varying intervals and can count toward the MECM minor if they are structured to include substantial content relating to the foci and goals of the program. Contact the program coordinator to apply one of these courses to the MECM minor.

Department of Anthropology and Sociology

SOCI 311. Sociology of the Environment **Credits: 3.00**

SOCI 321. Politics in Society **Credits: 3.00**

SOCI 348. Introduction to Developing Societies **Credits: 3.00**

SOCI 360. Social Movements **Credits: 3.00**

School of Art, Design and Art History

ARTH 419. Topics in African Art **Credits: 3.00**

Department of English

ENG 430. Advanced Studies in Comparative Literature **Credits: 3.00**

ENG 433. Advanced Studies in Arabic Literature **Credits: 3.00**

Department of Foreign Languages, Literatures and Cultures

ARAB 330. Business Arabic **Credits: 3.00**

ARAB 339. Literatures of the Islamic World 600-1500 A.D. **Credits: 3.00**

ARAB 340. Intermediate Arabic Conversation **Credits: 3.00**

ARAB 400. Advanced Arabic Writing and Conversation **Credits: 3.00**

ARAB 447. Special Topics in Arabic Civilization and Culture **Credits: 3.00**

ARAB 448. Special Topics in Arabic Linguistics **Credits: 3.00**

Department of Political Science

POSC 340. Politics of Development **Credits: 3.00**

POSC 361. Topics in International Relations **Credits: 3.00**

POSC 371. Topics in Comparative Politics **Credits: 3.00**

Department of Philosophy and Religion

REL 300. Selected Topics in Religion **Credits: 3.00**

HUM 252. Global Cultures [C2HQC] **Credits: 3.00** (Islamic Civilization)

Modern European Studies Minor

John A. Scherpereel, **Coordinator**

Phone: (540) 568-3933

Email: scherpja@jmu.edu

Website: <http://www.jmu.edu/mes/minor.shtml>

The minor in modern European studies provides a cross disciplinary understanding of social dynamics in Europe from the Enlightenment (18th century) through the present. Modern European studies minors will be prepared for careers in public, private, non-profit and educational institutions and will be able to apply critical insights on European culture, thought, history and society in their professions. All minors must attain proficiency in French, German, Italian, Spanish or another European Union language at or above the intermediate level (FL 232 or above).

Students must complete 18 credit hours in addition to the language requirement. These 18 credit hours must include six core credits and 12 elective credits. Six elective credits must cover culture and thought, and six

elective credits must cover history and society. The minor's 18 credits must be distributed across at least three disciplines and must include at least one history course.

Core

Choose two from the following: 6 Credit Hours

HIST 382. Europe in the 20th Century **Credits: 3.00**

POSC 344. Politics of the European Union **Credits: 3.00**

POSC 345. Politics of Western Europe **Credits: 3.00**

POSC 346. Politics of Central and Eastern Europe **Credits: 3.00**

Culture and Thought Electives

Choose two from the following: 6 Credit Hours

ARTH 313. Masterpieces of Italian Renaissance Art **Credits: 3.00**

ARTH 314. Masterpieces of Spanish Art [C2VPA] **Credits: 3.00**

ARTH 316. Masterpieces of British Art **Credits: 3.00**

ARTH 360. Nineteenth Century Art **Credits: 3.00**

ARTH 372. Modern Art From 1900-1945 **Credits: 3.00**

ARTH 472. Modern Art Since 1945 **Credits: 3.00**

ENG 325. Romantic Literature **Credits: 3.00**

ENG 327. Gothic Literature **Credits: 3.00**

ENG 329. Victorian Literature **Credits: 3.00**

ENG 330. Nineteenth Century British Novel **Credits: 3.00**

ENG 340. Modern British and Irish Literature **Credits: 3.00**

ENG 341. Contemporary British and Irish Literature **Credits: 3.00**

ENG 375. Irish and Anglo-Irish Literature **Credits: 3.00**

HUM 200L. Great Works - London [C2L] **Credits: 3.00** The London Theatre (London only)

FR 308. Contemporary History and Culture in the Francophone World **Credits: 3.00**

FR 446. Special Topics in Francophone Literature **Credits: 3.00**²

FR 465. French Cinema 1930-1980 **Credits: 3.00**

FR 466. Contemporary French Cinema **Credits: 3.00**

GER 307. History of German Culture and Society **Credits: 3.00**

GER 308. Contemporary German Culture and Society **Credits: 3.00**

GER 405. The Age of German Classicism **Credits: 3.00**

GER 425. Modern German Literature **Credits: 3.00**

GER 465. German Cinema **Credits: 3.00**

ITAL 308. Contemporary Italian History and Culture **Credits: 3.00**
or

ITAL 425. Modern Italian Literature **Credits: 3.00**

ITAL 446. Special Topics in Italian Literature **Credits: 3.00**²

ITAL 465. Italian Cinema **Credits: 3.00**

ITAL 490F. Special Studies in Italian **Credits: 3.00**

PHIL 344. Existentialism **Credits: 3.00**

PHIL 390. Special Topics in Philosophy **Credits: 3.00**²

PHIL 468. Phenomenology **Credits: 3.00**

POSC 316. Contemporary Political Theory **Credits: 3.00**

POSC 321. Political Theory and Ideology **Credits: 3.00**

REL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**
or

PHIL 375. Nineteenth Century Philosophy and Theology **Credits: 3.00**

SMAD 463L. Film Adaptations **Credits: 3.00**
SPAN 307. History of Spanish Culture and Society **Credits: 3.00**

SPAN 335. Introduction to Hispanic Literature **Credits: 3.00**
or
SPAN 335S. Introduction to Spanish Literature **Credits: 3.00**

SPAN 405. Spanish Novels of the 19th and 20th Centuries **Credits: 3.00**
SPAN 406. Spanish Drama of the 19th and 20th Centuries **Credits: 3.00**
SPAN 461. Post War Literature in Spain **Credits: 3.00**

SPAN 465. Cinema and Literature **Credits: 3.00**
or
SPAN 465S. Cinema and Literature **Credits: 3.00**

History and Society Electives

Choose two of the following: 6 Credit Hours

GEOG 332. Geography of Europe **Credits: 3.00**
HIST 308. Contemporary Italian History and Culture **Credits: 3.00**
HIST 321. Gender and Sexuality in Modern Europe **Credits: 3.00**
HIST 341. Selected Themes in World History **Credits: 3.00**²
HIST 382. Europe in the 20th Century **Credits: 3.00**³
HIST 388. Germany Since 1871 **Credits: 3.00**
HIST 398. European Military History **Credits: 3.00**
HIST 462. Human Trafficking in African History **Credits: 3.00**
HIST 478. Eastern Europe **Credits: 3.00**
HIST 486. Europe Since 1914 **Credits: 3.00**
HIST 487. World War II **Credits: 3.00**
HIST 488. The Holocaust in Global Context **Credits: 3.00**
HIST 489. Selected Topics in World History **Credits: 3.00**²

SMAD 360L. British Media and Society **Credits: 3.00**
or
SCOM 360L. British Media and Society **Credits: 3.00**
or
WRTC 360L. British Media and Society **Credits: 3.00**

POSC 344. Politics of the European Union **Credits: 3.00**³
POSC 345. Politics of Western Europe **Credits: 3.00**³
POSC 346. Politics of Central and Eastern Europe **Credits: 3.00**³
POSC 371. Topics in Comparative Politics **Credits: 3.00**^{2,3}
POSC 371S. Special Studies Salamanca **Credits: 3.00**

POSC 472L. Media and Politics **Credits: 3.00** (London only)
or
SCOM 472L. Media and Politics **Credits: 3.00** (London only)
or
SMAD 472L. Media and Politics **Credits: 3.00** (London only)

Footnotes

¹ This course is taught every other fall on campus and is occasionally offered as part of JMU's short-term Study Abroad Summer Program in Berlin.

² This course may only be used in the minor when its topic is relevant to the minor. Questions should be directed to the minor coordinator.

³ This course may not be double-counted toward the minor.

Total: 18 Credit Hours

Music and Human Services Minor

Jesse Rathgeber, **Coordinator**

Phone: (540) 568-5279

Email: rathgejc@jmu.edu

This minor will prepare students for vocational and avocational opportunities to use music performance, education, entrepreneurship and community engagement skills to serve diverse populations in human service settings. Students with interest and musical backgrounds are welcome.

Requirements for the minor are 18 credits: 15 credit hours from a set of core courses and three credits from electives.

Degree Requirements

MUS 206. Introduction to Global Music [C2VPA] **Credits: 3.00**
MUS 429. Introduction to Intentional Music **Credits: 1.00**
MUS 430. Music and Human Services: Experiences and Practicum **Credits: 2.00**
MUED 431. Psychology of Music **Credits: 3.00**
MUED 485. Teaching Music to Students with Special Needs **Credits: 3.00**
PSYC 250. Introduction to Abnormal Psychology **Credits: 3.00**
PSYC 335. Abnormal Psychology **Credits: 3.00**

Choose three credits from the following: 3 Credit Hours

EXED 200. Foundations of Exceptional Education **Credits: 3.00**
EXED 303. Foundations of Classroom and Behavior Management **Credits: 3.00**
EXED 306. Lifespan Issues for Individuals with Disabilities **Credits: 3.00**
EXED 443. Assistive Technology Use for Individuals With Disabilities **Credits: 3.00**
DANC 325. Dance in Community **Credits: 3.00**
MUS 150. Introduction to Technological Applications in Music **Credits: 1.00**

Total: 18 Credit Hours

Footnotes

¹ Access limited; additional sections offered during the summer.

² Only offered to psychology majors or through transfer credit.

Non-Profit Studies Minor

Terrence Fernsler, **Minor Adviser**

Phone: (540) 568-6980

Email: fernslts@jmu.edu

Website: <http://www.jmu.edu/socwork/nonprofit.html>

The nonprofit studies minor prepares students from a variety of disciplines to understand the unique role of nonprofit organizations in American society. Emphasis is placed on history, theory, legal issues and management topics. The minor includes a capstone seminar and a field experience in a nonprofit agency with the focus to be determined in conjunction with the adviser.

Required Courses

NPS 300. Introduction to Nonprofits **Credits: 3.00**¹
NPS 320. Nonprofit Management **Credits: 3.00**¹
NPS 400. Internship/Practicum in Nonprofit Studies **Credits: 4.00 – 6.00**¹
NPS 450. Nonprofit Studies Capstone Seminar **Credits: 3.00**¹
Major elective (discipline specific) **3.00**²
Elective **3.00**²

Footnotes

¹ Course has one or more prerequisites.

² A course to be determined in consultation with the nonprofit studies adviser.

Total: 19-21 Credit Hours

Political Communication Minor

Valerie A. Sulfaro, **Coordinator**

Phone: (540) 568-3997

Email: sulfarva@jmu.edu

Website: <https://www.jmu.edu/commstudies/minors.shtml>

The program in political communication is designed for those students wishing to supplement their major programs with an emphasis on communication skills, knowledge and abilities specifically relevant to participation in political environments. Students must complete a core set of courses, an internship in the field of political communication and a selection of electives.

All political communication minors are required to take a PCOM internship in the Department of Political Science or the Department of Communication Studies. Before enrolling for a PCOM internship, students should have attained junior status, completed the PCOM core requirements and taken at least one upper level PCOM course. Some academic units may have additional prerequisites for their internship course. All SCOM majors with a minor in PCOM are required to take SCOM 495 for their PCOM internship requirement (and to have met the prerequisites for this course). POSC, INTA and PPA majors minoring in PCOM must complete POSC 493 to fulfill the internship requirement. All other majors may take either POSC 493 or SCOM 495 as a means of satisfying their internship. Before pursuing any internship, students must consult with the PCOM coordinator to ensure that the internship is suitable for the minor.

For SMAD majors, only three credits from the minor may be counted toward the major.

SMAD majors may double count POSC/SCOM/SMAD 472 for the SMAD major and the PCOM minor.

All students must complete 25-26 credit hours for the minor.

Required Courses

POSC 225. U.S. Government [C4AE] **Credits: 4.00**

POSC 472. Media and Politics **Credits: 3.00**¹

or

SCOM 472. Media and Politics **Credits: 3.00**¹

or

SMAD 472. Media and Politics **Credits: 3.00**¹

SCOM 353. American Political Culture and Communication **Credits: 3.00**

Choose one of the following: 3-4 Credit Hours

POSC, PPA and INTA majors: 4 Credit Hours

POSC 493. Political Communication Internship **Credits: 4.00**

SCOM majors: 3 Credit Hours

SCOM 495. Internship in Communication Studies **Credits: 3.00-6.00**

Non-POSC and Non-SCOM majors: 3-4 Credit Hours

POSC 493. Political Communication Internship **Credits: 4.00**

or

SCOM 495. Internship in Communication Studies **Credits: 3.00-6.00**

Choose one of the following: 3 Credit Hours

POSC 365. American Political Campaigning **Credits: 3.00**²

POSC 369. Elections and Voting Behavior **Credits: 3.00**²

Choose one of the following: 3 Credit Hours

SCOM 352. Communication and Social Movements **Credits: 3.00**³

SCOM 453. Political Campaign Communication **Credits: 3.00**³

Choose two of the following: 6 Credit Hours

POSC 300. Politics and Film **Credits: 3.00**

POSC 341. Social Movements in the U.S. and Abroad **Credits: 3.00**

POSC 362. Political Behavior **Credits: 3.00**

POSC 364. Political Parties in America **Credits: 3.00**

POSC 368. Interest Groups, Lobbying and Public Policy **Credits: 3.00**

POSC 382. The Role of Religion in American Politics **Credits: 3.00**

POSC 383. Women and Politics in Comparative Perspective **Credits: 3.00**

POSC 384. Minority Group Politics **Credits: 3.00**

POSC 385. The U.S. Congress **Credits: 3.00**

POSC 387. The Appellate Process and Practice **Credits: 3.00**

SCOM 342. Argument and Advocacy **Credits: 3.00**

SCOM 346. Free Speech in America **Credits: 3.00**

SCOM 354. Environmental Communication and Advocacy **Credits: 3.00**

SCOM 420. Feminist Rhetorics **Credits: 3.00**

or

WRTC 420. Feminist Rhetorics **Credits: 3.00**

or

WGSS 420. Feminist Rhetorics **Credits: 3.00**

SCOM 431. Legal Communication **Credits: 3.00**

Total: 25-26 Credit Hours

Footnotes

¹ POSC 472L will not count toward this requirement.

² If both POSC 365 and POSC 369 are taken, one may be counted as an elective.

³ If both SCOM 352 and SCOM 453 are taken, one may be counted as an elective.

Robotics Minor

Kevin Giovanetti, **Coordinator**

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The cross disciplinary minor in robotics is intended to offer STEM majors and students with an interest in science and technology a fundamental understanding of scientific and technical issues involved in the design, construction and application of robots.

Educational Goals

Students will have a basic understanding of robot control systems, sensors, motion, circuits and the overall design of robots.

Students will be able to design and develop autonomous robots and robot control software.

Students will develop an understanding of how advances in robotics technology can be used in diverse applications.

Students will learn to work on a cross disciplinary team developing a technical product.

Required Courses

Basic Preparation ¹

Choose one of the following: 3 Credit Hours

CS 149. Introduction to Programming **Credits: 3.00**

IA 241. Introduction to Programming and Data Science **Credits: 3.00**

ISAT 252. Programming and Problem Solving **Credits: 3.00**

Choose one of the following: 3-4 Credit Hours

The 20 credit hour option is only available with the selection of MATH 232.

MATH 232. Calculus with Functions II **Credits: 3.00**

or

MATH 235. Calculus I [C3QR] **Credits: 4.00**

ISAT 151. Topics in Applied Calculus in ISAT [C3QR] **Credits: 4.00**

Choose one of the following: 4 Credit Hours

Students who have completed the physical principles area of Cluster Three with a course not listed below should meet with the minor adviser.

PHYS 140. College Physics I [C3PP] **Credits: 3.00**

and

PHYS 140L. General Physics Laboratory [C3L] **Credits: 1.00**

or

PHYS 240. University Physics I [C3PP] **Credits: 3.00**

and

PHYS 240L. University Physics Laboratory I [C3L] **Credits: 1.00**

or

ISAT 152. Topics in Applied Physics in ISAT **Credits: 4.00**

Core Course

Choose one of the following: 3 Credit Hours

CS 354. Introduction to Autonomous Robotics **Credits: 3.00**

PHYS 386. Robots: Structure and Theory **Credits: 3.00**

PHYS 387. Theory and Basic Principles of Mobile Robot Construction and Control **Credits: 3.00**

Electives

At least one elective must be from a different department from the core course.

Choose at least six credits from the following: 6 Credit Hours

CS 444. Artificial Intelligence **Credits: 3.00**

ENGR 440. Mechatronics **Credits: 3.00**

ISAT 331. Cyber-Physical Industry **Credits: 3.00**

ISAT 341. Machine Learning and Data Science **Credits: 3.00**

ISAT 441. Simulation and Modeling **Credits: 3.00**

ISAT 449. Emerging Topics in Applied Data Science **Credits: 3.00**

MATH 238. Linear Algebra with Differential Equations **Credits: 4.00**

MATH 248. Computers and Numerical Algorithms **Credits: 4.00**

MATH 341. Non-Linear Dynamics and Chaos **Credits: 3.00**

PHYS 371. Digital Electronics **Credits: 2.00**

PHYS 372. Microcontrollers and Their Applications (2, 4) **Credits: 2.00**

PHYS 388. Robots for Humanity **Credits: 3.00**

Robotics Project Course

CISE 481. Robotics Project Summary **Credits: 1.00** ²

Total: 20-21 Credit Hours

Footnotes

¹ A basic preparation course may be waived by the minor adviser if a student has completed a comparable course or experience.

² CISE 481 is intended to summarize a capstone robotics project experience. In order to register for CISE 481 students must have completed or be enrolled in an approved capstone, special topics, or independent study course that involves a robotics project. At the discretion of the robotics minor adviser, students may also qualify for CISE 481 by completing an internship, research experience or professional project that entails robotics design and/or development. Consult the minor adviser for more information.

Russian Studies Minor

Stephany G. Plecker, **Co-Coordinator**

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Colleen Moore, **Co-Coordinator**

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This minor offers students a broad, cross disciplinary perspective on Russian culture, history, political institutions, economy and geography. It deepens the students' understanding and knowledge of the Russian and non-Russian peoples of the former Soviet Union, and prepares them for careers in teaching, government and international business.

The Russian Studies minor requires 18 credits with a minimum of six credits of Russian language. Students must take courses in at least three different disciplines.

Courses

ECON 312. Comparative Economic Systems **Credits: 3.00**

HIST 385. The Russian Empire **Credits: 3.00**

HIST 386. The Soviet Union: A Socialist Experiment **Credits: 3.00**

HIST 474. Stalinism: Approaches, Experiences and Legacies **Credits: 3.00**

HIST 475. Modern Russia **Credits: 3.00**

HUM 200. Great Works [C2L] **Credits: 3.00** (Russian Literature in Translation)

RUS 300. Grammar and Communication **Credits: 3.00**

RUS 308. Introduction to Russian Culture **Credits: 3.00**

RUS 315. Russian Phonetics **Credits: 3.00**

RUS 320. Russian Oral and Written Communication **Credits: 3.00**

RUS 400. Advanced Conversation **Credits: 3.00**

RUS 438. Studies in Russian Literature **Credits: 3.00**

Students may include one course from the following:

ECON 490. Special Studies in Economics **Credits: 1.00 - 3.00**

FL 490. Special Studies in Foreign Languages **Credits: 1.00 - 4.00** (Russian)

GEOG 490. Senior Research or Field Practicum **Credits: 3.00**

Total: 18 Credit Hours

Special topics courses can be applied to the minor with approval of the program coordinator. Students may also earn credit by studying in a program in Russia or any of the former Soviet states.

Science, Technology and Society Minor

Shannon Conley-Phillips, **Coordinator**

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Science, technology and society (STS) is an internationally recognized field of cross disciplinary study that integrates philosophical, social scientific and humanistic studies to better understand the natural and human-built world. The minor offers students the opportunity to critically examine science, technology and medicine as methods for reasoning about and acting upon the natural world as expressions of human cultures, past and present.

Students learn to scrutinize the ideas, reasoning, values, practices and artifacts embedded in the world they inhabit today. They explore how choices made within various historical, social, economic and political contexts sometimes influence the development of science, technology and medicine. They also see how the adoption and diffusion of ideas, artifacts and techniques can then influence individuals, society, politics and culture. Courses in this minor draw students together from diverse majors across the campus and encourage open inquiry into the role of science and technology in society.

The minor in STS is open to all undergraduate students at JMU. Courses taken to complete the STS minor can also be used to satisfy the student's major and General Education requirements.

The STS minor requires 18 credit hours with at least one course each from the history, sociology and ISAT courses listed.

Required Courses

Choose one: 3 Credit Hours

HIST 327. Makers, Users, Skeptics and Thieves: Americans and Their Technologies **Credits: 3.00**

SOCI 315. Technology and Society **Credits: 3.00**

ISAT 271. Technology, Science and Society **Credits: 3.00**

Elective Courses

Choose five from at least four different programs/majors: 15 Credit Hours

ANTH 360. Medical Anthropology **Credits: 3.00**

CS 330. Societal and Ethical Issues in Computing **Credits: 3.00**

GEOG 322. Agricultural Systems **Credits: 3.00**

GEOG 325. Environmental Ethics **Credits: 3.00**

GEOG 429. Sustainability: An Ecological Perspective **Credits: 3.00**
or

ISAT 429. Sustainability: An Ecological Perspective **Credits: 3.00**

HIST 305. History of Science and Christianity **Credits: 3.00**

HIST 306. A History of the Body in the West **Credits: 3.00**

HIST 326. How Cars Changed Everything **Credits: 3.00**

HIST 327. Makers, Users, Skeptics and Thieves: Americans and Their Technologies **Credits: 3.00**

HIST 404. Science and Society in Early Modern Europe **Credits: 3.00**

HIST 405. Travel and Exploration **Credits: 3.00**

HIST 427. U.S. Environmental History **Credits: 3.00**

HIST 443. Modern American Technology and Culture **Credits: 3.00**

ISAT 171. Governance of Sociotechnical Systems **Credits: 3.00**

ISAT 311. Role of Energy in Modern Society **Credits: 3.00**

ISAT 411. Energy Economics and Policy **Credits: 3.00**

ISAT 421. Environmental Policy & Regulation **Credits: 3.00**

ISAT 456. Ethical, Legal and Social Implications of Biotechnology **Credits: 3.00**

ISAT 477. Complex Systems and How They Fail **Credits: 3.00**

ISAT 483. Topics in Science, Technology and Society **Credits: 3.00**

ISAT 487. Science, Technology and Society Futures Laboratory **Credits: 1.00 - 3.00**

PHIL 396. Philosophy of Physics **Credits: 3.00**

PHIL 397. Philosophy of Space and Time **Credits: 3.00**

PHIL 398. Philosophy of Quantum Theory **Credits: 3.00**

PHIL 410. Philosophy of Science **Credits: 3.00**

SOCI 311. Sociology of the Environment **Credits: 3.00**

SOCI 375. Medical Sociology **Credits: 3.00**

WGSS 485. Gender Issues in Science **Credits: 3.00**

or

ISAT 485. Gender Issues in Science **Credits: 3.00**

WRTC 358. Writing About Science and Technology **Credits: 3.00**

WRTC 416. Rhetoric of Environmental Science and Technology **Credits: 3.00**

or

SCOM 465. Rhetoric of Environmental Science and Technology **Credits: 3.00**

WRTC 458. Scientific and Medical Communication **Credits: 3.00**

Total: 18 Credit Hours

Special topics courses not listed can be applied to the minor with prior approval of the program coordinator.

Social Justice Studies Minor

Christine Robinson, **Coordinator**

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The minor in social justice studies is administered by the Department of Justice Studies.

The minor is open to all undergraduate students at James Madison University **except** Justice Studies majors whose concentration area is Social Justice Engagement. The requirement for completing the minor is 18 credits. Students should allow a minimum of four semesters in which to complete the minor.

Students will complete one required introductory course (from two options) and then select five additional electives. No more than two courses may be double-counted in the minor from a student's major/minor. The Department of Justice Studies will waive the prerequisite (JUST 200) for SJS minors whose major is not Justice Studies.

The cross-disciplinary minor in Social Justice Studies fosters educated and enlightened citizenship through a foundational curriculum designed for students who are engaged in social justice endeavors and/or preparing for careers and advanced professional or graduate work in relevant fields.

This minor is designed to:

- introduce students to the cross-disciplinary field of social justice, focusing on understanding, analyzing and evaluating scholarship on the origins, persistence and nature of oppression; social justice theories; and diverse, exemplar models of social justice praxis
- provide a curriculum where students may pursue their own topical interests in social justice studies and apply/further their knowledge and skills in social justice studies

- support students' success and resiliency in social justice endeavors (civic or professional)

Required Course: 3 Credit Hours

The Department of Justice Studies will waive the prerequisite (JUST 200) for SJS minors whose major is not Justice Studies.

Students must declare the SJS minor to take one of the following two courses:

JUST 221. Social Justice Theories **Credits: 3.00**

or

JUST 223. Social Justice Interventions and Policies **Credits: 3.00**

Electives: 15 Credit Hours

Students must meet both prerequisites below to take elective courses for the Social Justice Studies minor. Some electives below may require additional prerequisites (according to the JMU course catalog).

Declaration of the Social Justice Studies Minor

Successful completion of JUST 221 or JUST 223

Choose five additional electives from the list below. Electives must represent at least three different departments. Only one sociology course may be selected.

ENG 359. Studies in African American Literature **Credits: 3.00**

ENG 360. Introduction to Ethnic American Literature **Credits: 3.00**

ENG 361. African American Fiction **Credits: 3.00**

ENG 362. African American Poetry **Credits: 3.00**

ENG 363. Native American Literature **Credits: 3.00**

ENG 379. Literature and Empire **Credits: 3.00**

HIST 461. Marxism **Credits: 3.00**

JUST 317. Victimization of Children **Credits: 3.00**³

JUST 331. Human Rights in Theory and Practice **Credits: 3.00**³

JUST 341. Gender and Justice **Credits: 3.00**³

or

WGSS 341. Gender and Justice **Credits: 3.00**

JUST 343. Justice and Society **Credits: 3.00**³

JUST 357. Environmental Justice **Credits: 3.00**³

JUST 375. Genocide in the 20th Century **Credits: 3.00**³

JUST 385. Disability and Justice **Credits: 3.00**³

JUST 386. Sexual Orientation, Law and Justice **Credits: 3.00**³

POSC 341. Social Movements in the U.S. and Abroad **Credits: 3.00**

POSC 351. Topics in American Politics **Credits: 3.00** (when the topic is approved)¹

POSC 367. U.S. Immigration and Refugee Law **Credits: 3.00**

POSC 371. Topics in Comparative Politics **Credits: 3.00** (when the topic is approved)¹

POSC 383. Women and Politics in Comparative Perspective **Credits: 3.00**

or

WGSS 383. Women and Politics in Comparative Perspective **Credits: 3.00**

POSC 384. Minority Group Politics **Credits: 3.00** (when the topic is approved)¹

SCOM 343. Contemporary Rhetorical Theory and Practice **Credits: 3.00**

or

WRTC 430. Contemporary Rhetorical Theory and Practice **Credits: 3.00** (when the topic is approved)¹

SCOM 348. Communication and Gender **Credits: 3.00**

SCOM 352. Communication and Social Movements **Credits: 3.00**

SCOM 354. Environmental Communication and Advocacy **Credits: 3.00**

or

WRTC 326. Environmental Communication and Advocacy **Credits: 3.00**

SCOM 355. Food as Communication **Credits: 3.00**

SCOM 357. Youth, Communication and Culture **Credits: 3.00**

SCOM 420. Feminist Rhetorics **Credits: 3.00**

or

WGSS 420. Feminist Rhetorics **Credits: 3.00**

or

WRTC 420. Feminist Rhetorics **Credits: 3.00**

SCOM 448. Communication, Culture and Identity **Credits: 3.00**² (for SCOM majors only)

SOCI 318. Sociology of Immigration **Credits: 3.00**

SOCI 335. Disability and Society **Credits: 3.00**

SOCI 337. Sociology of Gender **Credits: 3.00**

or

WGSS 337. Sociology of Gender **Credits: 3.00**

SOCI 357. Sociology of Disasters **Credits: 3.00**

SOCI 360. Social Movements **Credits: 3.00**

SOCI 367. Sociology of Sexuality **Credits: 3.00**

or

WGSS 367. Sociology of Sexuality **Credits: 3.00**

THEA 303. Topics in Theater **Credits: 1.00 - 3.00**

(when the topic is approved)¹

WRTC 314. Writing in the Public Sphere **Credits: 3.00**

WRTC 426. Special Topics in Writing, Rhetoric and Technical Communication **Credits: 3.00** (when the topic is approved)¹

WRTC 484. Writing for Nonprofits **Credits: 3.00**

WRTC 486. Writing in the Community **Credits: 3.00**

Footnote

¹ May be taken for elective credit only when the topic is pre-approved. Students will be notified by the coordinator prior to enrollment if there are any pre-approved courses.

² This course may be taken by SCOM majors only.

³ The Department of Justice Studies will waive the prerequisite (JUST 200) for SJS minors whose major is not Justice Studies.

Social Studies Minor

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The social studies minor offers a program of integrated study that exposes students to diverse methodologies, philosophies and controversies that define the social sciences. It is a required minor for secondary education students who wish to teach social studies and suggested for those planning to teach middle school. The minor incorporates economics, geography, history and political science and is offered in three forms: one for secondary education with a history major, one for secondary education with a political science major and one for middle education. Students not selecting the secondary education licensure program should declare the middle education form of the minor.

Minor Requirements

History Major with Social Studies Minor

Requirements for the History B.A. are on the History Department page.

Degree Requirements

	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
Major requirements	33-34
Minor requirements (listed below)	23-26
Electives	2-20
Total	120

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within the major or minor.

² The foreign language requirement may be satisfied by successful completion of the second semester of the intermediate level of the student's chosen language (typically 232), or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures' placement test.

Political Science Major with Social Studies Minor

Requirements for the Political Science B.A. are on the Political Science Department page.

Degree Requirements

	Credit Hours
General Education ¹	41
Foreign Language classes (intermediate level required) ²	0-14
Philosophy course (in addition to General Education courses)	3
Major requirements	39
Minor requirements (listed below)	26
Electives	0-11
Total	120-123

Footnotes

¹ The General Education program contains a set of requirements each student must fulfill. Some requirements may be fulfilled by courses within the major or minor.

² The foreign language requirement may be satisfied by successful completion

of the second semester of the intermediate level of the student's chosen language (typically 232), or by placing out of that language through the Department of Foreign Languages, Literatures and Cultures' placement test.

Social Studies Minor Requirements

To be licensed to teach secondary school social studies, the student must satisfactorily complete requirements for a baccalaureate degree in either history or political science and complete the SS minor that is paired with that major.

Social Studies Minor for History Majors

History Majors in Four-year Program

Social Studies Minor Core:14 Credit Hours

HIST 225. U.S. History [C4AE] **Credits: 4.00** ¹

POSC 225. U.S. Government [C4AE] **Credits: 4.00** ¹

ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**
or

ECON 201. Introduction to Microeconomics **Credits: 3.00**

GEOG 200. Geography: The Global Dimension [C4GE] **Credits: 3.00**
or

GEOG 280. Human Geography: The Cultural Landscape **Credits: 3.00**

Capstone: 3 Credit Hours

HIST 357. Fates of Empires **Credits: 3.00** ¹

or

POSC 457. Fates of Empires **Credits: 3.00** ²

Footnotes

¹ For four-year program: MSSE 412 and HIST 357 spring junior year double count in history and ISS.

² For five-year program: MSSE 412 and POSC 457 fall senior year count in ISS only.

Government and Politics Requirement: 6 Credit Hours

POSC 335. Comparative Politics for Teachers **Credits: 3.00**

POSC American government elective

Credits / Units: 3.00

African American History Requirement

African American history is now a state licensure requirement for everyone licensed to teach social studies graduating after May 2023. Therefore all students in this program need to complete a course in African American history and culture.

These courses may double-count for this requirement and other select requirements.

HIST 307. The Trans-Atlantic Slave Trade **Credits: 3.00**

HIST 322. Jim Crow South **Credits: 3.00**

HIST 323. The Old South **Credits: 3.00**

HIST 356. African American History Since 1865 **Credits: 3.00**

Total: 23 Credit Hours

History Majors in Five-year Program

Social Studies Minor Core: 14 Credit Hours

HIST 225. U.S. History [C4AE] **Credits: 4.00** ¹

POSC 225. U.S. Government [C4AE] **Credits: 4.00** ¹

ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**
or

ECON 201. Introduction to Microeconomics **Credits: 3.00**
GEOG 200. Geography: The Global Dimension [C4GE] **Credits: 3.00**
or
GEOG 280. Human Geography: The Cultural Landscape **Credits: 3.00**

Capstone: 3 Credit Hours

HIST 357. Fates of Empires **Credits: 3.00**¹
or

POSC 457. Fates of Empires **Credits: 3.00**²

Footnotes

¹ For four-year program: MSSE 412 and HIST 357 spring junior year double count in history and ISS.

² For five-year program: MSSE 412 and POSC 457 fall senior year count in ISS only.

Government and Politics Requirement: 9 Credit Hours

POSC 335. Comparative Politics for Teachers **Credits: 3.00**

POSC American government elective

Credits / Units: 3.00

Political Science civic engagement elective or second American government elective. **Credits / Units: 3.00**

African American History Requirement

African American history is now a state licensure requirement for everyone licensed to teach social studies graduating after May 2023. Therefore all students in this program need to complete a course in African American history and culture.

These courses may double-count for this requirement and other select requirements.

HIST 307. The Trans-Atlantic Slave Trade **Credits: 3.00**

HIST 322. Jim Crow South **Credits: 3.00**

HIST 323. The Old South **Credits: 3.00**

HIST 356. African American History Since 1865 **Credits: 3.00**

Total: 26 Credit Hours

Social Studies Minor for Political Science Majors

HIST 225 must be completed for General Education credit.

Political Science Majors in Five-year Program

Social Studies Minor Core: 14 Credit Hours

HIST 225. U.S. History [C4AE] **Credits: 4.00**¹

POSC 225. U.S. Government [C4AE] **Credits: 4.00**¹

ECON 200. Introduction to Macroeconomics [C4GE] **Credits: 3.00**³
or

ECON 201. Introduction to Microeconomics **Credits: 3.00**

GEOG 200. Geography: The Global Dimension [C4GE] **Credits: 3.00**
or

GEOG 280. Human Geography: The Cultural Landscape **Credits: 3.00**

Capstone: 3 Credit Hours

HIST 357. Fates of Empires **Credits: 3.00**
or

POSC 457. Fates of Empires **Credits: 3.00**

Footnotes

¹ For four year program: MSSE 412 and POSC 457 spring junior year double count in political science and ISS.

² For five year program: MSSE 412 and POSC 457 fall senior year count in ISS only.

³ May double-count for General Education credit.

Choose one. Thinking Geographically: 3 Credit Hours

HIST 333. Maps, Money, Manufacture and Trade **Credits: 3.00**
GEOG 300 or 400 level

Credits / Units: 3.00

Choose one. Virginia History requirement: 3 Credit Hours

HIST 303. Virginia's Place in #VastEarlyAmerica **Credits: 3.00**

HIST 350. Virginia **Credits: 3.00**

African American History Requirement

African American history is now a state licensure requirement for everyone licensed to teach social studies graduating after May 2023. Therefore all students in this program need to complete a course in African American history and culture.

These courses may double-count for this requirement and other select requirements.

HIST 307. The Trans-Atlantic Slave Trade **Credits: 3.00**

HIST 322. Jim Crow South **Credits: 3.00**

HIST 323. The Old South **Credits: 3.00**

HIST 356. African American History Since 1865 **Credits: 3.00**

Choose one. Connected History Courses: 3 Credit Hours

HIST 307. The Trans-Atlantic Slave Trade **Credits: 3.00**

HIST 314. Plagues, Saints and Empires: The World before 1500 **Credits: 3.00**

HIST 315. Global History of Sport **Credits: 3.00**

HIST 353. International and Multicultural Histories of the Modern Middle East **Credits: 3.00**

HIST 318. Our Better Angels?: The World History of Violence **Credits: 3.00**

HIST 334. A Global History of Nationalism **Credits: 3.00**

HIST 365. Topics in Connected History **Credits: 3.00**

HIST 368. Blurred Borders: A Cultural History of the Caribbean, Latin America and the United States **Credits: 3.00**

HIST 373. History of the Ottoman Empire, 1453-1922 **Credits: 3.00**

Total: 26 Credit Hours

Social Studies Minor for Middle Education

Required Courses: 10 Credit Hours

HIST 102. World History Since 1500 [C2HQC] **Credits: 3.00**¹

HIST 225. U.S. History [C4AE] **Credits: 4.00**¹

POSC 335. Comparative Politics for Teachers **Credits: 3.00**

Capstone: 3 Credit Hours

HIST 357. Fates of Empires **Credits: 3.00**²
or

POSC 457. Fates of Empires **Credits: 3.00**²

Choose one. Pre-modern World History course: 3 Credit Hours

ANTH 205. Buried Cities, Lost Tribes: The Rise and Fall of Early Human Societies [C2HQC] **Credits: 3.00**

HIST 101. World History to 1500 [C2HQC] **Credits: 3.00**

HIST 314. Plagues, Saints and Empires: The World before 1500 **Credits: 3.00**

REL 101. Religions of the World [C2HQC] **Credits: 3.00**

or other courses with permission

Choose one. Virginia History Requirement: 3 Credit Hours

HIST 303. Virginia's Place in #VastEarlyAmerica **Credits: 3.00**

HIST 350. Virginia **Credits: 3.00**

Choose one. Thinking with Geography and Economics: 3 Credit Hours

HIST 333. Maps, Money, Manufacture and Trade **Credits: 3.00**

IDLS 395. Topics in IDLS **Credits: 1.00 - 6.00** (IDLS 395 must have topic: People, Money & Place for three credit hours).

African American History Requirement

African American history is now a state licensure requirement for everyone licensed to teach social studies graduating after May 2023. Therefore all students in this program need to complete a course in African American history and culture.

These courses may double-count for this requirement and other select requirements. It can count as one of the social studies elective courses.

HIST 307. The Trans-Atlantic Slave Trade **Credits: 3.00**

HIST 322. Jim Crow South **Credits: 3.00**

HIST 323. The Old South **Credits: 3.00**

HIST 356. African American History Since 1865 **Credits: 3.00**

Two Social Studies electives: 6-7 Credit Hours

The social studies electives requirement will be waived for students who have declared two content areas for the Middle Education major. The course that fulfills the African American history requirement can also count towards this requirement.

See adviser for this requirement. Generally courses

in HIST/POSC/SOC/ANTH/GEOG/ECON/IDLS offered at the 200-400 level will be approved for this requirement.

Total: 28-29 Credit Hours

Footnotes

¹ May double-count for General Education credit.

² Capstone; corequisite with MSSE 412.

Total: 120 Credit Hours

Sport Communication Minor

Michael Souders, **Coordinator**

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This minor consists of course work offered in communication studies, media arts and design, and kinesiology for students with an interest in sports media and communication.

Because of the curriculum sequence, it typically takes four consecutive semesters to complete the minor. Rising seniors typically cannot complete the minor by graduation. Some required courses are offered only one semester a year.

Any course taken to fulfill a degree requirement in sport communication minor must be completed with a minimum grade of "C-." A sport communication course completed with a grade of "D" may be credited toward graduation but may not be included as course work toward the sport communication minor. Additionally, courses completed with a grade less than "C-" will not count as fulfilling prerequisites for future courses, and enrolled students may be

administratively removed from courses for which they have not completed a required prerequisite with a minimum grade of "C-".

This minor is open to any student at the university including SCOM majors.

Required Courses

KIN 242. Introduction to Sport Communication **Credits: 3.00**

KIN 243. Sport Communication Techniques: Broadcasting **Credits: 3.00**

or

SMAD 243. Sport Communication Techniques: Broadcasting **Credits: 3.00**

KIN 244. Sport Communication Techniques: Writing and Reporting **Credits: 3.00**

or

SCOM 244. Sport Communication Techniques: Writing and Reporting **Credits: 3.00**

or

SMAD 244. Sport Communication Techniques: Writing and Reporting **Credits: 3.00**

SCOM 260. Introduction to Public Relations **Credits: 3.00**

SCOM 318. Practicum in Communication Studies **Credits: 1.00 - 6.00** (*Must enroll in SCOM 318 for 3.00 credit hours*)

SCOM 365. Sports Public Relations **Credits: 3.00**

SCOM 464. Communication, Culture and Sports **Credits: 3.00**

Choose one of the following: 2-3 Credit Hours

KIN 304. History and Philosophy of Physical Education and Sport **Credits: 2.00**

KIN 329. Social Aspects of Sport **Credits: 3.00**

SCOM 348. Communication and Gender **Credits: 3.00**

or

WGSS 348. Communication and Gender **Credits: 3.00**

SCOM 342. Argument and Advocacy **Credits: 3.00**

SCOM 347. Communication, Diversity and Popular Culture **Credits: 3.00**

SCOM 350. Organizational Communication **Credits: 3.00**

SCOM 370. Introduction to Health Communication **Credits: 3.00**

Approved Special Topics Class in KIN or SCOM

Total: 23-24 Credit Hours

Substance Use Disorder Education Minor

Katherine Ott Walter, **Adviser**

Phone: (540) 568-8972

Email: ottwalmk@jmu.edu

This cross disciplinary substance use disorder education minor provides the student with the foundational knowledge and skills necessary to assist communities in designing evidenced-based prevention/education programs to encourage healthy attitudes and behaviors toward alcohol, tobacco and other drugs. Course work in this minor will help prepare the student for the Certified Prevention Professionals-ATOD exam, which they can take after one year of prevention-related paid work experience and additional prevention-specific training.

Students must complete 18 credit hours from the categories outlined below. Students must take one of the Alcohol, Tobacco and Other Drugs (ATOD) specific courses. The remaining 15 credits must be selected from the additional courses listed below, preferably one from each category. No more than three courses may be taken from a single subject area (PSYC, HTH, SOWK, etc.), and no more than three courses can count for both the student's major/additional minor and the substance use disorder education minor.

Required Courses

Alcohol, Tobacco and Other Drugs (ATOD) (Must select one of the following courses): 3 Credit Hours

HTH 378. The Use and Effects of Drugs **Credits: 3.00**

PSYC 285. Drugs and Behavior **Credits: 3.00**

SOWK 327. Substance Use Interventions **Credits: 3.00**

Select five courses from the list of courses below (No more than three courses may be taken from a single subject area, e.g., PSYC, HTH, SOWK, etc.): 15 Credit Hours

Prevention, Education and Service Delivery

HTH 351. Health Behavior Change **Credits: 3.00**

JUST 221. Social Justice Theories **Credits: 3.00**

JUST 301. Advanced Level Special Topics in Justice Studies **Credits: 3.00**¹

JUST 345. Restorative Justice **Credits: 3.00**

PSYC 250. Introduction to Abnormal Psychology **Credits: 3.00**

PSYC 308. Health Psychology **Credits: 3.00**

PSYC 335. Abnormal Psychology **Credits: 3.00**

SOWK 386. Youth Empowerment Strategies (YES) **Credits: 3.00**

SOWK 387. Working with Teens **Credits: 3.00**

Communication

SCOM 370. Introduction to Health Communication **Credits: 3.00**

SCOM 470. Health Communication Campaigns **Credits: 3.00**

WRTC 484. Writing for Nonprofits **Credits: 3.00**

WRTC 486. Writing in the Community **Credits: 3.00**

WRTC 488. Writing in the Health Sciences **Credits: 3.00**

Community Organizing

FAM 375. Grant Writing for Agencies **Credits: 3.00**

or

GERN 375. Grant Writing for Agencies **Credits: 3.00**

or

NPS 375. Grant Writing for Agencies **Credits: 3.00**

or

SOWK 375. Grant Writing for Agencies **Credits: 3.00**

or

HTH 456. Grant Writing in Health Sciences **Credits: 3.00**²

NPS 300. Introduction to Nonprofits **Credits: 3.00**

Public Policy and Environmental Change

PPA 359. Policy Analysis **Credits: 3.00**

PPA 462. Social Welfare and Local Government Policy **Credits: 3.00**

WRTC 326. Environmental Communication and Advocacy **Credits: 3.00**

or

SCOM 354. Environmental Communication and Advocacy **Credits: 3.00**

SOWK 335. Social Policy **Credits: 3.00**

HTH 420. Global Perspectives on Alcohol and Drug Policies **Credits: 3.00**²

HTH 422. Public Health and Healthcare Policy **Credits: 3.00**

Planning and Evaluation

HTH 458. Health Program Planning and Evaluation **Credits: 3.00**

Total: 18 Credit Hours

Footnotes

¹ When topics are minor related, to be approved by the coordinator.

² Offered in summer only.

Urban and Regional Studies Minor

Henry A. Way, **Coordinator**

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The minor in urban and regional studies prepares students for careers or graduate training in government. While satisfying the B.A. or B.S. requirements of their chosen major, students may complement that major with a 21 credit hour minor in urban and regional studies drawn from the following courses.

Required Courses: 9 Credit Hours

GEOG 376. Urban Geography **Credits: 3.00**

ECON 475. Regional Economics **Credits: 3.00**

SOCI 372. Sociology of the Community **Credits: 3.00**

Choose from the following: 12 Credit Hours

Must be in a discipline other than the student's major.

ECON 326. Public Finance **Credits: 3.00**

ECON 340. Economics of Natural Resources **Credits: 3.00**

GEOG 315. Field Studies in Geography **Credits: 3.00**

GEOL 310 A - D. Environmental Impact **Credits: 2.00 - 3.00**

or

GEOG 310. Environmental Issues **Credits: 1.00 - 4.00**

GEOL 430. Environmental Soil Science (2, 2) **Credits: 3.00**

POSC 302. State & Local Gov **Credits: 3.00**

POSC 495. Internship in Political Science **Credits: 4.00**

SOCI 352. Birth, Death, Sex: Exploring Demography **Credits: 3.00**

SOCI 361. Sociology of Organizations **Credits: 3.00**

Total: 21 Credit Hours

Women's, Gender and Sexuality Studies Minor

Mary Thompson, **Coordinator**

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Email: thompsmx@jmu.edu

Website: <http://www.jmu.edu/womenstudies>

This is an 18-credit hour cross disciplinary program that explores the scholarship related to gender, sexuality and women. Women's, gender and sexuality studies is concerned with gender as it intersects with multiple categories such as race/ethnicity, sexuality, economic class and age. This concern is framed by recognition of increased globalization and technological growth impacting social institutions and gendered identities. Students in women's, gender and sexuality studies will develop academic frameworks for understanding gender, diversity and social justice; they will acquire knowledge and skills that prepare them for careers in advocacy and communications. This minor includes one of the following required courses, WGSS 200 or SOCI 337 / WGSS 337. Students may double count a maximum of nine credit hours

toward both a major and this minor. Students may count only six credit hours below the 300-level.

Required Course: 3 Credit Hours

Choose one of the following:

WGSS 200. Introduction to Women's, Gender and Sexuality Studies [C5SD] **Credits: 3.00**

WGSS 337. Sociology of Gender **Credits: 3.00**

SOCI 337. Sociology of Gender **Credits: 3.00**

Choose five of the following: 15 Credit Hours

Any WGSS course may count toward the WGSS minor.

ANTH 360. Medical Anthropology **Credits: 3.00**

ANTH 370. Topics in the Anthropology of Gender **Credits: 3.00**

ANTH 376. Anthropology of Reproduction **Credits: 3.00**

or

WGSS 376. Anthropology of Reproduction **Credits: 3.00**

ECON 306. The Economics of Women and the Family **Credits: 3.00**

ENG 327. Gothic Literature **Credits: 3.00**

ENG 368. Women's Literature **Credits: 3.00**

or

WGSS 368. Women's Literature **Credits: 3.00**

ENG 369. Feminist Literary Theory **Credits: 3.00**

or

WGSS 369. Feminist Literary Theory **Credits: 3.00**

ENG 370. Queer Literature **Credits: 3.00**

or

WGSS 370. Queer Literature **Credits: 3.00**

ENG 423. Advanced Studies in Gender and Sexuality in Literature **Credits: 3.00**

ENG 466. Advanced Studies in Women's Literature **Credits: 3.00**

or

WGSS 466. Advanced Studies in Women's Literature **Credits: 3.00**

GEOG 377. Feminist Geography **Credits: 3.00**

GEOG 477. Gendered Geographies **Credits: 3.00**

HIST 319. Women at Work in U.S. History **Credits: 3.00**

HIST 320. Women in U.S. History **Credits: 3.00**

HIST 321. Gender and Sexuality in Modern Europe **Credits: 3.00**

HIST 326. How Cars Changed Everything **Credits: 3.00**¹

HIST 327. Makers, Users, Skeptics and Thieves: Americans and Their Technologies **Credits: 3.00**²

HIST 448. Gender in Latin America and the Iberian World **Credits: 3.00**

HIST 449. Women and Fascism **Credits: 3.00**

ISAT 485. Gender Issues in Science **Credits: 3.00**

or

WGSS 485. Gender Issues in Science **Credits: 3.00**

JUST 311. Women, Crime and Criminal Justice **Credits: 3.00**

JUST 341. Gender and Justice **Credits: 3.00**

or

WGSS 341. Gender and Justice **Credits: 3.00**

JUST 385. Disability and Justice **Credits: 3.00**¹

JUST 386. Sexual Orientation, Law and Justice **Credits: 3.00**

MSCI 355. American Women At War **Credits: 3.00**

or

WGSS 355. American Women At War **Credits: 3.00**

PHIL 350. The Philosophy of Feminism **Credits: 3.00**

or

WGSS 350. The Philosophy of Feminism **Credits: 3.00**

POSC 383. Women and Politics in Comparative Perspective **Credits: 3.00**

or

WGSS 383. Women and Politics in Comparative Perspective **Credits: 3.00**

PSYC 310. The Psychology of Women and Gender **Credits: 3.00**

REL 306. Gender and Sexuality in Islam **Credits: 3.00**

REL 315. Women and Religion **Credits: 3.00**

SCOM 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**

or

WGSS 301. Feminist Blogging: Writing for Shout Out! JMU **Credits: 3.00**

SCOM 302. Third Wave Ecofeminism **Credits: 3.00**

or

WGSS 302. Third Wave Ecofeminism **Credits: 3.00**

SCOM 348. Communication and Gender **Credits: 3.00**

or

WGSS 348. Communication and Gender **Credits: 3.00**

SOCI 336. Race and Ethnicity **Credits: 3.00**¹

SOCI 347. Queer Theories of Gender and Inequality **Credits: 3.00**

or

WGSS 347. Queer Theories of Gender and Inequality **Credits: 3.00**

SOCI 354. Social Inequality **Credits: 3.00**

SOCI 367. Sociology of Sexuality **Credits: 3.00**

or

WGSS 367. Sociology of Sexuality **Credits: 3.00**

SCOM 420. Feminist Rhetorics **Credits: 3.00**

or

WRTC 420. Feminist Rhetorics **Credits: 3.00**

or

WGSS 420. Feminist Rhetorics **Credits: 3.00**

SPAN 455. Women in Hispanic Literatures **Credits: 3.00**

WGSS 300. Special Topics in Women's, Gender and Sexuality Studies **Credits: 3.00**³

WGSS 325. Gender and Violence **Credits: 3.00**

WGSS 400. Issues and Research in Women's, Gender and Sexuality Studies **Credits: 3.00**

WGSS 417. Women's Global Health and Human Rights **Credits: 3.00**

or

HTH 417. Women's Global Health and Human Rights **Credits: 3.00**

or

NSG 417. Women's Global Health and Human Rights **Credits: 3.00**

WGSS 490. Special Studies in Women's, Gender and Sexuality Studies **Credits: 3.00**

WGSS 492. Internship in Women's, Gender and Sexuality Studies **Credits: 1.00 - 3.00**

WGSS 495. Special Topics in Women's, Gender and Sexuality Studies **Credits: 3.00**

Footnotes

¹ Final project must take gender as its topic

² If research project addresses issue of gender.

³ May be repeated as topic varies.

Total: 18 Credit Hours

World Literature Minor

Debali Mookerjee-Leonard, **Coordinator**

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The cross disciplinary minor in world literature is designed for students who wish to extend their critical understanding of literature and other artistic productions beyond the confines of Anglo-America and offers them the opportunity to study literary and artistic productions from Africa, Asia, the Caribbean Islands, continental Europe, Latin America and the Middle East. By offering a broad yet substantial introduction to literature and other arts produced beyond their traditional experience, the minor provides students with a bridge to understanding new cultures and languages. It aims to equip students with the critical and analytical skills necessary to reflect upon and appreciate these artistic practices as well as to develop a clear understanding of social context and artistic expression by encouraging them to think outside the local and on a more global level. The minor provides a good foundation for students to meet the challenges of graduate studies in comparative literature, world cinema and cultural studies/history.

The minimum requirement for a minor in world literature is 18 hours. Six credit hours may be double-counted between the minor and the major or general education courses. In addition to the gateway course, ENG 239, students can take one 200-level course to count toward the minor. The Department of English and the Department of Foreign Languages, Literatures and Cultures (FLLC) offer a range of courses which will fulfill the minor. FLLC offers students the opportunity to study non-English language literatures from Europe often in the original language, while all courses in the English department are taught in English or in translation. Students can also take a maximum of two relevant courses from disciplines other than English and foreign languages, with the permission of the program coordinator. Students should consult the coordinator about new courses and appropriateness of the subject of special topics courses. The following courses may include several sections per term—ENG 221, ENG 222, ENG 302, ENG 368, ENG 383, ENG 385, ENG 405, ENG 410, ENG 412, ENG 423, ENG 466, HUM 200—and only certain sections will satisfy the minor requirement. Students electing this minor can acquire more information from the program coordinator regarding courses which will count toward the minor. Courses from disciplines other than English and foreign languages may be considered for credit with the prior approval of the coordinator.

Required Course: 3 Credit Hours

ENG 239. Studies in World Literature [C2L] **Credits: 3.00**

Choose five of the following: 15 Credit Hours

ARAB 307. A History of Islamic Civilization 600-1600 A.D. **Credits: 3.00**

ARAB 308. Contemporary Islamic Civilization **Credits: 3.00**

ARAB 339. Literatures of the Islamic World 600-1500 A.D. **Credits: 3.00**

ARAB 385. The Arabian Nights **Credits: 3.00**

ARAB 386. Arabic Fables and Short Stories **Credits: 3.00**

ARAB 446. Special Topics in Arabic Literature **Credits: 3.00**

ENG 221. Literature/Culture/Ideas [C2L] **Credits: 3.00**

ENG 222. Genre(s) [C2L] **Credits: 3.00**

ENG 260. Survey of African American Literature [C2L] **Credits: 3.00**

ENG 302. Special Topics in Literature and Language **Credits: 3.00**

ENG 305. Mythology **Credits: 3.00**

ENG 306. The Bible as Literature **Credits: 3.00**

ENG 358. Oral Literature **Credits: 3.00**

ENG 360. Introduction to Ethnic American Literature **Credits: 3.00**

ENG 361. African American Fiction **Credits: 3.00**

ENG 362. African American Poetry **Credits: 3.00**

ENG 363. Native American Literature **Credits: 3.00**

ENG 364. Introduction to Asian American Literature **Credits: 3.00**

ENG 368. Women's Literature **Credits: 3.00**

ENG 377. Introduction to African Literature **Credits: 3.00**

ENG 378. Studies in South Asian Literature **Credits: 3.00**

ENG 379. Literature and Empire **Credits: 3.00**

ENG 383. Film Genre **Credits: 3.00**

ENG 385. Special Topics in Film Study **Credits: 3.00**

ENG 405. Advanced Studies in Anglophone Literature **Credits: 3.00**

ENG 408. Advanced Studies in African American Literature **Credits: 3.00**

ENG 410. Advanced Studies in Author **Credits: 3.00**

ENG 412. Special Topic Seminar **Credits: 3.00**

ENG 420. Advanced Studies in Theory and Cultural Studies **Credits: 3.00**

ENG 423. Advanced Studies in Gender and Sexuality in Literature **Credits: 3.00**

ENG 430. Advanced Studies in Comparative Literature **Credits: 3.00**

ENG 432. Advanced Studies in African Literature **Credits: 3.00**

ENG 433. Advanced Studies in Arabic Literature **Credits: 3.00**

ENG 434. Advanced Studies in Latin American Literature in Translation **Credits: 3.00**
or

SPAN 434. Advanced Studies in Latin American Literature in Translation **Credits: 3.00**

ENG 436. Studies in German Literature **Credits: 3.00**

or

GER 436. Studies in German Literature **Credits: 3.00**

ENG 437. Studies in Italian Literature **Credits: 3.00**

or

ITAL 437. Studies in Italian Literature **Credits: 3.00**

ENG 438. Studies in Russian Literature **Credits: 3.00**

or

RUS 438. Studies in Russian Literature **Credits: 3.00**

ENG 439. Advanced Studies in Major Authors of Literature in Spanish in Translation **Credits: 3.00**
or

SPAN 439. Major Authors of Literature in Spanish in Translation **Credits: 3.00**

ENG 466. Advanced Studies in Women's Literature **Credits: 3.00**

FR 307. History of French Culture and Society **Credits: 3.00**

FR 308. Contemporary History and Culture in the Francophone World **Credits: 3.00**

FR 335. Introduction to Francophone Literature **Credits: 3.00**

FR 339. French Literature of the Enlightenment **Credits: 3.00**

FR 399. French Short Stories **Credits: 3.00**

FR 420. Advanced Genre Studies **Credits: 3.00**

FR 446. Special Topics in Francophone Literature **Credits: 3.00**

FR 447. Special Topics in Francophone Culture **Credits: 3.00**

FR 448. Special Topics in Francophone Linguistics **Credits: 3.00**

FR 465. French Cinema 1930-1980 **Credits: 3.00**

FR 466. Contemporary French Cinema **Credits: 3.00**

FR 490. Special Studies in French **Credits: 1.00 - 4.00**

GER 307. History of German Culture and Society **Credits: 3.00**

GER 308. Contemporary German Culture and Society **Credits: 3.00**

GER 335. Introduction to German Literature **Credits: 3.00**

GER 386. German Short Stories **Credits: 3.00**

GER 405. The Age of German Classicism **Credits: 3.00**
 GER 415. German Romanticism and Realism **Credits: 3.00**
 GER 425. Modern German Literature **Credits: 3.00**
 GER 446. Special Topics in German Literature **Credits: 3.00**
 GER 447. Special Topics in German Culture **Credits: 3.00**
 GER 465. German Cinema **Credits: 3.00**
 GER 490. Special Studies in German **Credits: 1.00 - 4.00**
 HUM 200. Great Works [C2L] **Credits: 3.00**
 HUM 252. Global Cultures [C2HQC] **Credits: 3.00**¹
 ITAL 307. History of Italian Culture and Society **Credits: 3.00**
 ITAL 308. Contemporary Italian History and Culture **Credits: 3.00**
 HIST 308. Contemporary Italian History and Culture **Credits: 3.00**
 ITAL 335. Introduction to Italian Literature **Credits: 3.00**
 ITAL 380. Italian Language and Culture Through Regional Cuisine **Credits: 3.00**
 ITAL 386. Italian Short Stories **Credits: 3.00**
 ITAL 425. Modern Italian Literature **Credits: 3.00**
 ITAL 446. Special Topics in Italian Literature **Credits: 3.00**
 ITAL 447. Special Topics in Italian Culture **Credits: 3.00**
 ITAL 465. Italian Cinema **Credits: 3.00**
 ITAL 490. Special Studies in Italian **Credits: 1.00 - 4.00**
 JAPN 446. Special Topics in Japanese Literature **Credits: 3.00**
 JAPN 447. Special Topics in Japanese Culture **Credits: 3.00**
 JAPN 490. Special Studies in Japanese **Credits: 1.00 - 4.00**
 RUS 308. Introduction to Russian Culture **Credits: 3.00**
 SPAN 307. History of Spanish Culture and Society **Credits: 3.00**
 SPAN 308. Latin American Cultures **Credits: 3.00**
 SPAN 335. Introduction to Hispanic Literature **Credits: 3.00**
 SPAN 385. Latin American Short Story **Credits: 3.00**
 SPAN 386. Spanish Short Stories **Credits: 3.00**
 SPAN 395. Latin American Poetry **Credits: 3.00**
 SPAN 405. Spanish Novels of the 19th and 20th Centuries **Credits: 3.00**
 SPAN 406. Spanish Drama of the 19th and 20th Centuries **Credits: 3.00**
 SPAN 407. Aspects of Contemporary Spanish Culture and Society **Credits: 3.00**
 SPAN 415. Latin American Novel **Credits: 3.00**
 SPAN 424. Spanish Picaresque Novel **Credits: 3.00**
 SPAN 425. Prose of the Golden Age **Credits: 3.00**
 SPAN 426. Drama of the Golden Age **Credits: 3.00**
 SPAN 427. Poetry of the Golden Age **Credits: 3.00**
 SPAN 428. Don Quixote **Credits: 3.00**
 SPAN 446. Special Topics in Spanish Literature **Credits: 3.00**
 SPAN 447. Special Topics in Spanish Culture **Credits: 3.00**
 SPAN 455. Women in Hispanic Literatures **Credits: 3.00**
 SPAN 461. Post War Literature in Spain **Credits: 3.00**
 SPAN 462. Spanish Comic Theater of the 20th Century **Credits: 3.00**
 SPAN 465. Cinema and Literature **Credits: 3.00**
 SPAN 490. Special Studies in Spanish **Credits: 1.00 - 3.00**

Total: 18 Credit Hours

Footnote

¹ Global South Asia section only.

Youth Justice Minor

Rita Poteyeva, **Coordinator**

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The cross disciplinary minor in youth justice is designed for students who are interested in working in the juvenile justice system or in other agencies serving adolescents. Students will become proficient in the latest research on the principles of adolescent development, will understand the impact of trauma and will become familiar with current best practices of preventing and responding to juvenile delinquency.

The minor program is open to all undergraduate students at JMU. The requirement is the successful completion of 18 credit hours. No more than two courses may be double counted for a student's major/minor. No more than nine hours may be taken from a single discipline.

Required Course: 3 Credit Hours

YTHJ 300. Introduction to Youth Justice **Credits: 3.00**

Elective Courses: 15 Credit Hours

Choose five.

JUST 301. Advanced Level Special Topics in Justice Studies **Credits: 3.00**¹ (*When topic is relevant for YTHJ program. Consult program coordinator.*)

JUST 316. Human Development and Crime **Credits: 3.00**¹

JUST 317. Victimization of Children **Credits: 3.00**¹

JUST 345. Restorative Justice **Credits: 3.00**¹

PPA 200. Introduction to Public Policy **Credits: 3.00** (prerequisite POSC 225)

PSYC 285. Drugs and Behavior **Credits: 3.00** (prerequisite PSYC 101)

PSYC 365. Developmental Psychology **Credits: 3.00**²

SOCI 336. Race and Ethnicity **Credits: 3.00**

SOCI 341. Sociology of Education **Credits: 3.00**

SOWK 325. Parent-Child Relationships Across the Lifespan **Credits: 3.00**³

SOWK 335. Social Policy **Credits: 3.00**³

SOWK 338. Issues and Policies in Family Services **Credits: 3.00**³

SOWK 340. Violence in Families **Credits: 3.00**

SOWK 342. Child Welfare Services **Credits: 3.00**

SOWK 375. Grant Writing for Agencies **Credits: 3.00**

SOWK 387. Working with Teens **Credits: 3.00**

SOWK 487. Special Topics **Credits: 3.00** (Substance Abuse Intervention)

YTHJ 400. Transforming Youth Justice Integrative Seminar **Credits: 3.00**

YTHJ 405. Internship in Transformative Youth Justice Studies **Credits: 3.00**

Total: 18 Credit Hours

Footnote

¹ These courses have lower-level prerequisite courses that justice studies majors take early in their careers. The prerequisites are waived for registered youth justice minors.

² Psychology majors only.

³ Social work majors only.

Pre-Professional Teacher Licensure

Art Education Professional PK-12 Licensure

Coordinator: Karin Tollefson-Hall

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Art education professional PK-12 licensure is available to all studio and design majors. In addition to the general education and academic major requirements, students desiring PreK-12 teaching licensure in art must complete 26 credits of additional course work in art education, education and psychology, and 16 credits of student teaching. It is necessary to be admitted to the teacher education program prior to enrolling in professional education courses. For a complete description of admission and retention policies and procedures for teacher education, refer to the College of Education.

Students seeking licensure are encouraged to consult regularly with the program coordinator of art education. The undergraduate degree leading to licensure must include the following minimum requirements in art:

- Nine credits must be earned in art history and art appreciation.
- Six credits must be earned in ceramics and crafts, with a minimum of one course in ceramics.
- Six credits must be earned in three-dimensional media, with one course in sculpture.
- Twelve credits must be earned in four different two-dimensional media.
- Twenty-seven studio credits, with a minimum of six credits in each of three separate studio areas.

Course Requirements

The following is a list of the required courses leading to PK-12 art licensure and a suggested sequence of when each may be taken.

Required Courses

ART 304. Methods of Art Criticism **Credits: 3.00** (spring, second year)
 AREC 300. Elementary Art Education Methods (1, 4) **Credits: 3.00** (fall, third year)
 AREC 302. Secondary Art Education Methods **Credits: 3.00** (spring, third year)
 AREC 400. Visual Arts Across the Curriculum (1,4) **Credits: 3.00** (fall, fourth year)
 AREC 490. Field Experiences in Art Education **Credits: 1.00-3.00** (AREC 490 repeatable; taken concurrently with AREC 300, AREC 302 and AREC 400 for two credit hours three times for a total of six credit hours)

Total: 18 Credit Hours

Required Education and Psychology Courses

Required Courses

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**^{1,2}
 EDUC 200. Foundations of Education in the United States **Credits: 3.00**²
 LED 420. Content Area Literacy, K-12 **Credits: 2.00**
 AREC 480. Student Teaching **Credits: 8.00**

(taken twice for a total of 16 Credit Hours)

Total: 24 Credit Hours

Footnotes

¹ PSYC 160 may double-count toward General Education Cluster Five.

² Minimum grade of "C" required in EDUC 200, PSYC 160 and WRTC 103.

Dance Teaching Licensure

In addition to general education and theatre and dance requirements, students desiring PreK-12 teaching licensure in dance must complete 25 credits of additional course work in health professions, education, psychology, dance and

12 credits of student teaching. It is necessary to be admitted to the teacher education program prior to enrolling in professional education courses. For a complete description of admission and retention policies and procedures for teacher education, refer to the College of Education.

Course Requirements

Students seeking licensure are encouraged to consult regularly with the program coordinator of dance education. The undergraduate degree leading to licensure must include the following minimum requirements in dance:

- Course work in each area: ballet, folk¹, jazz and modern dance. Typically completed as part of the dance major, but may require additional course(s) to fulfill.
- Course work in one area of concentration in ballet, folk, jazz or modern dance beyond entry level.
- Course work in composition, improvisation, and dance arts production.
- Course work in scientific foundations, including human anatomy, kinesiology, and injury prevention and care for dance arts.
- Course work in cultural understanding, including cultural context and dance history.

The following is a list of the required courses leading to PreK-12 dance licensure and a suggested sequence of when each may be taken.

Required Courses

ATEP 205. Introduction to Athletic Training **Credits: 3.00** (spring, junior)
 STAD 322. Equity, Inclusion and Access in Education and Performance **Credits: 3.00** (junior)
 DANC 315. Injury Prevention and Conditioning **Credits: 3.00**
 DANC 380. Dance Teaching Practicum **Credits: 3.00** (prior to student teaching)

Total: 12 Credit Hours

Required Education and Psychology Courses

EDUC 200. Foundations of Education in the United States **Credits: 3.00** (spring, sophomore)²
 PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00** (may double count for General Education)²
 MSSE 425. Assessment in Middle and Secondary Education **Credits: 3.00** (spring, junior)
 LED 420. Content Area Literacy, K-12 **Credits: 2.00** (fall, senior)
 DANC 480. Student Teaching **Credits: 3.00 - 12.00** (Must be taken for 12.00 Credit Hours)

Total: 23 Credit Hours

Required Jazz Dance Courses (choose 2 credits of the following)

DANC 146. Jazz Dance (0, 4) **Credits: 2.00**
 DANC 246. Intermediate Jazz **Credits: 2.00**
 DANC 346. Intermediate Jazz II/Musical Theatre Styles **Credits: 2.00**
 DANC 446. Advanced Jazz **Credits: 2.00**

Total: 2 Credit Hours

Total: 37 Credit Hours

Footnotes

¹ DANC 143 or DANC 303 (topic: folk dance) fulfill the folk dance requirement.

² Minimum grade of "C" required in EDUC 200, PSYC 160 and WRTC 103.

Earth Science Teaching Licensure

Teaching Licensure

Students interested in becoming teachers must meet specific curriculum requirements in their major as part of the undergraduate academic degree. The Earth science major includes state course requirements in astronomy, meteorology and oceanography, to total no less than 32 hours in the Earth sciences (including geology) and a minimum of 16 hours total in physics, chemistry and biology.

In addition to the general education and academic major requirements, Earth science majors desiring secondary teacher licensure must be admitted to the pre-professional program in secondary education at the undergraduate level and complete the graduate level Master of Arts in Teaching degree.

It is critical that students seeking teaching licensure consult regularly with both their education adviser and their major adviser to support their progression through the programs. For a full description of the program in secondary teaching, refer to the Department of Middle, Secondary and Mathematics Education, in addition to the College of Education.

English Teaching Licensure

Licensure Requirements

Students interested in becoming secondary education English teachers (grades 6-12) must meet specific curriculum requirements in order to qualify for English teacher licensure. Many of these requirements may also count as part of the 36 credit hour English major requirements.

Required Courses: 6 Credit Hours

LED 254. Literature for Adolescents **Credits: 3.00** ¹

ENG 299. Writing About Literature **Credits: 3.00**

Required Literature Survey: 3 Credit Hours

Choose one of the following courses:

ENG 235. Survey of English Literature: From Beowulf to the Eighteenth Century [C2L]

Credits: 3.00

or

ENG 247. Survey of American Literature: From the Beginning to the Civil War [C2L]

Credits: 3.00

Additional Literature Surveys: 6 Credit Hours

Choose two of the following courses:

ENG 235. Survey of English Literature: From Beowulf to the Eighteenth Century [C2L]

Credits: 3.00 ¹

ENG 236. Survey of English Literature: Eighteenth Century to Modern [C2L] **Credits: 3.00** ¹

ENG 239. Studies in World Literature [C2L] **Credits: 3.00**

ENG 247. Survey of American Literature: From the Beginning to the Civil War [C2L]

Credits: 3.00

ENG 248. Survey of American Literature: From the Civil War to the Modern Period [C2L]

Credits: 3.00

ENG 260. Survey of African American Literature [C2L] **Credits: 3.00**

Footnotes

¹ LED 254 will not fulfill any requirement in the English, B.A. degree program.

² ENG 235 and ENG 247 may not double count for the Required Literature Survey course and the Additional Literature Surveys courses.

English Grammar: 3 Credit Hours

Choose one of the following:

ENG 303. History of the English Language **Credits: 3.00**

ENG 308. Introduction to Linguistics **Credits: 3.00**

ENG 309. Traditional English Grammar **Credits: 3.00**

ENG 310. Modern English Grammar **Credits: 3.00**

Shakespeare: 3 Credit Hours

Choose one of the following:

ENG 317. Studies in Shakespeare **Credits: 3.00**

ENG 319. Teaching Shakespeare **Credits: 3.00**

ENG 320L. Shakespeare on the Page and Stage in London **Credits: 3.00**

Writing: 3 Credit Hours

Choose one of the following:

ENG 390. The Environmental Imagination **Credits: 3.00**

ENG 391. Introduction to Creative Writing – Nonfiction **Credits: 3.00**

ENG 392. Introduction to Creative Writing – Poetry **Credits: 3.00**

ENG 393. Introduction to Creative Writing – Fiction **Credits: 3.00**

ENG 396. Advanced Composition **Credits: 3.00**

Additional Courses

If not already taken in one of the categories above or as part of the English B.A. requirements:

- At least one course in American literature
- At least one course in British literature
- At least one course in World literature
- At least one course in African American literature
- At least one course in Gender and Sexuality
- At least one course in pre-1700 literature
- At least one course in pre-1900 literature

Some of these courses may fulfill more than one category in the English major requirements.

World Literature Courses:

The following courses will fulfill the world literature requirement:

ENG 239. Studies in World Literature [C2L] **Credits: 3.00**

ENG 358. Oral Literature **Credits: 3.00**

ENG 374. Contemporary Global Anglophone Literature **Credits: 3.00**

ENG 376. Introduction to Scottish Literature **Credits: 3.00**

ENG 377. Introduction to African Literature **Credits: 3.00**

ENG 378. Studies in South Asian Literature **Credits: 3.00**

ENG 379. Literature and Empire **Credits: 3.00**

ENG 405. Advanced Studies in Anglophone Literature **Credits: 3.00**

ENG 432. Advanced Studies in African Literature **Credits: 3.00**

ENG 433. Advanced Studies in Arabic Literature **Credits: 3.00**

ENG 434. Advanced Studies in Latin American Literature in Translation **Credits: 3.00**

African American Literature Courses:

The following courses will fulfill the African American literature requirement:

ENG 260. Survey of African American Literature [C2L] **Credits: 3.00**

ENG 359. Studies in African American Literature **Credits: 3.00**

ENG 361. African American Fiction **Credits: 3.00**

ENG 362. African American Poetry **Credits: 3.00**

ENG 408. Advanced Studies in African American Literature **Credits: 3.00**

Gender and Sexuality Courses:

The following courses will fulfill the gender and sexuality requirement:

ENG 368. Women's Literature **Credits: 3.00**

ENG 369. Feminist Literary Theory **Credits: 3.00**

ENG 370. Queer Literature **Credits: 3.00**

ENG 423. Advanced Studies in Gender and Sexuality in Literature **Credits: 3.00**

ENG 466. Advanced Studies in Women's Literature **Credits: 3.00**

Pre-1700 Courses:

The following courses will fulfill the pre-1700 requirement:

ENG 301. Old English Language and Literature **Credits: 3.00**

ENG 306. The Bible as Literature **Credits: 3.00**

ENG 311. Medieval Literature and Culture **Credits: 3.00**

ENG 313. Studies in Early Modern Literature and Culture **Credits: 3.00**

ENG 316. Early Modern Drama **Credits: 3.00**

ENG 317. Studies in Shakespeare **Credits: 3.00**

ENG 319. Teaching Shakespeare **Credits: 3.00**

ENG 320L. Shakespeare on the Page and Stage in London **Credits: 3.00**

ENG 401. Advanced Studies in Medieval Literature **Credits: 3.00**

ENG 402. Advanced Studies in British Literature Before 1700 **Credits: 3.00**

Pre-1900 Courses:

The following courses will fulfill the pre-1900 requirement:

ENG 301. Old English Language and Literature **Credits: 3.00**

ENG 306. The Bible as Literature **Credits: 3.00**

ENG 311. Medieval Literature and Culture **Credits: 3.00**

ENG 313. Studies in Early Modern Literature and Culture **Credits: 3.00**

ENG 316. Early Modern Drama **Credits: 3.00**

ENG 317. Studies in Shakespeare **Credits: 3.00**

ENG 319. Teaching Shakespeare **Credits: 3.00**

ENG 320L. Shakespeare on the Page and Stage in London **Credits: 3.00**

ENG 321. Restoration and Eighteenth Century British Prose and Poetry **Credits: 3.00**

ENG 322. Restoration and Eighteenth Century British Drama **Credits: 3.00**

ENG 325. Romantic Literature **Credits: 3.00**

ENG 327. Gothic Literature **Credits: 3.00**

ENG 329. Victorian Literature **Credits: 3.00**

ENG 330. Nineteenth Century British Novel **Credits: 3.00**

ENG 342. Early American Literature **Credits: 3.00**

ENG 343. Antebellum American Literature **Credits: 3.00**

ENG 344. Late Nineteenth Century American Literature **Credits: 3.00**

ENG 352. The American Novel to 1914 **Credits: 3.00**

ENG 363. Native American Literature **Credits: 3.00**

ENG 401. Advanced Studies in Medieval Literature **Credits: 3.00**

ENG 402. Advanced Studies in British Literature Before 1700 **Credits: 3.00**

Additional Information

In addition to the General Education and academic major requirements, English majors desiring secondary education English teacher licensure must choose one of the following pathways:

1. English major, secondary education (SEED) major, admission to COE teacher education program and completion of program requirements, and fulfillment of the English teacher licensure requirements; or

2. English major, secondary education (SEED) minor, admission to COE teacher education program and completion of program requirements, fulfillment of English teacher licensure requirements, and completion of the graduate level Master of Arts in Teaching degree.

It is critical that students seeking licensure consult regularly with both their education adviser and their major adviser to support their progression through the programs. For a full description of the program in secondary teaching, refer to the Department of Middle, Secondary and Mathematics Education, in addition to the College of Education.

History Teaching Licensure

Teaching Licensure

Students interested in becoming secondary social studies teachers have their choice of a 5-year program (with MAT) or a 4-year program. Either can be done with the history major, choosing the teacher education concentration, an Interdisciplinary Social Sciences (ISS) minor, and either a major in secondary education (4-year program) or a minor in pre-professional secondary education (4-year program).

Students in this program must also be admitted to the College of Education. It is critical that students seeking licensure consult regularly with their education adviser, their ISS adviser, and their major adviser to support their progression through the programs. For a full description of the requirements see the **teaching history section of the history department website**.

Media Arts and Design Teaching Licensure

In addition to the general education and academic major requirements, media arts and design majors desiring to add an endorsement in journalism to a secondary teacher license in another content area must be admitted to teacher education, complete the pre-professional program in secondary education at the undergraduate level and complete the graduate level Master of Arts in Teaching degree.

It is critical that students seeking licensure consult regularly with both their education adviser and their major adviser to support their progression through the programs. For a full description of the program in secondary teaching, refer to the Department of Middle, Secondary and Mathematics Education.

Modern Foreign Languages Teaching Licensure

Interim Coordinator: José I. Barrio Olano

Phone: (540) 568-6128

Email: barrioji@jmu.edu

In conjunction with the College of Education, the department offers programs leading to the teaching license in French, German and Spanish. In addition to the General Education and academic major requirements, students desiring

preK-12 teaching licensure in French, German or Spanish must be accepted for admission to the teacher education program offered by the College of Education prior to enrolling in professional education courses. In addition to the 33 foreign language credits, an additional 39 credits are required for teaching licensure.

Students interested in teacher licensure in French, German or Spanish must also meet the specific curriculum requirements of their foreign language major as part of the undergraduate academic degree.

For a complete description of admission and retention policies and procedures for teacher education, refer to the College of Education. Students seeking licensure are encouraged to consult regularly with the teaching licensure coordinator.

Required Courses

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**¹
EDUC 200. Foundations of Education in the United States **Credits: 3.00**¹
EXED 303. Foundations of Classroom and Behavior Management **Credits: 3.00**
MSSE 370. General Instructional Methods for Grades 6-12 **Credits: 3.00**
MSSE 371. Clinical Experience in Adolescent Education **Credits: 1.00**
FLED 370. Modern Foreign Language Assessment **Credits: 3.00**
FLED 470. Methods of Modern Foreign Language Teaching **Credits: 3.00**
FLED 471. Modern Foreign Language Field Experience **Credits: 3.00**
FLED 475. Supervised Student Teaching Experience **Credits: 12.00**
FLED 476. Student Teaching Seminar **Credits: 3.00**
LED 420. Content Area Literacy, K-12 **Credits: 2.00**

Total: 39 Credit Hours

Footnote

¹ Minimum grade of "C" required in EDUC 200, PSYC 160 and WRTC 103.

Minimum Grades

A student must receive a minimum grade of "C-" for course credits to count toward any major or minor in the Department of FLLC.

Teacher Licensure in Theatre

In addition to general education (including WRTC 103) and theatre major requirements, students desiring PK-12 licensure in theatre must complete additional course work in education, psychology and theatre. It is necessary to be admitted to the teacher education program prior to enrolling in professional education courses. For a complete description of admission and retention policies and procedures for teacher education, refer to the College of Education.

Students seeking licensure are encouraged to consult regularly with the theatre education program adviser. The undergraduate degree leading to licensure must include the following minimum requirements in theatre:

- Theatre education and teaching artistry concentration requirements (15 credits)
- All theatre major core requirements (8 credits)
- All theatre major non-concentration requirements (28 credits)
- Directing (i.e. THEA 355) must be taken to fulfill the major's "performance requirement" (3 credits)

Theatre Education and Teaching Artistry

Concentration

Students who complete the theatre education and teaching artistry concentration are able to apply for a PreK-12 teaching licensure in theatre. This concentration requires 15 THEA credits.

Please refer to the Theatre Education and Teaching Artistry Concentration page for requirements.

Required Education and Psychology Courses

PSYC 160. Life Span Human Development [C5SD] **Credits: 3.00**¹
EDUC 200. Foundations of Education in the United States **Credits: 3.00**¹
LED 420. Content Area Literacy, K-12 **Credits: 2.00**
MSSE 425. Assessment in Middle and Secondary Education **Credits: 3.00**
THEA 325. Theatre Teaching Practicum **Credits: 3.00**²
THEA 480. Student Teaching **Credits: 3.00 - 12.00** (THEA 480 must be taken for a total of **Credits: 12.00**)²

Total: 26 Credit Hours

Footnotes

¹ Minimum grade of "C" required in EDUC 200, PSYC 160 and WRTC 103, and are prerequisites for teacher education.

² Students must be accepted to the teacher education program through the College of Education to enroll in THEA 325 and THEA 480.

Pre-Professional Program

Pre-Forensic Studies Advisory Program

Forensic scientists apply the knowledge and techniques of science to the purposes of law. Forensic studies incorporate a wide array of disciplines and can be vital to enforcing criminal laws and government regulations, settling civil disputes, and to protecting public health. Preparation guidelines are outlined for three common areas of graduate study in forensic studies:

Forensic Biology

A biology or chemistry major is recommended with the following:

BIO 140. Foundations of Biology I [C3NS] **Credits: 3.00 and**
BIO 140L. Foundations of Biology I Laboratory [C3L] **Credits: 1.00**

BIO 150. Foundations of Biology II **Credits: 3.00 and**
BIO 150L. Foundations of Biology II Laboratory **Credits: 1.00**

BIO 240. Genetics **Credits: 3.00 and**
BIO 240L. Genetics Laboratory **Credits: 1.00**

BIO 324. Human Genetics **Credits: 3.00**
BIO 343. Immunology **Credits: 3.00**

BIO 361. Biochemistry I **Credits: 3.00**
or
CHEM 361. Biochemistry I **Credits: 3.00**

CRJU 215. Introduction to Criminal Justice **Credits: 3.00**

Forensic Chemistry

A biology or chemistry major is recommended with the following:

CHEM 375. An Introduction to Materials Science **Credits: 3.00**

or

MATS 375. An Introduction to Materials Science **Credits: 3.00**

or

PHYS 375. An Introduction to Materials Science **Credits: 3.00**

CHEM 331. Physical Chemistry I **Credits: 3.00**

CHEM 351. Analytical Chemistry **Credits: 4.00**

CHEM 361. Biochemistry I **Credits: 3.00**

or

BIO 361. Biochemistry I **Credits: 3.00**

CRJU 215. Introduction to Criminal Justice **Credits: 3.00**

Forensic Anthropology

An anthropology (biological anthropology concentration) or biology major is recommended with the following:

ANTH 196. Biological Anthropology [C3NS] **Credits: 3.00**

BIO 270. Human Physiology [C3NS] **Credits: 3.00 and**

BIO 270L. Human Physiology Laboratory [C3L] **Credits: 1.00**

or

BIO 370. Animal Physiology **Credits: 4.00**

BIO 290. Human Anatomy **Credits: 3.00 and**

BIO 290L. Human Anatomy Laboratory **Credits: 1.00**

BIO 426. Topics in Biology **Credits: 1.00 - 4.00** (when topic is Forensic Anatomy)

or

ANTH 395. Special Topics in Anthropology **Credits: 3.00** (when topic is Forensic Anatomy)

Choose two of the following: 6 Credit Hours

MATH 321. Analysis of Variance and Experimental Design **Credits: 3.00**

MATH 324. Applied Nonparametric Statistics **Credits: 3.00**

MATH 421. Applied Multivariate Statistical Analysis **Credits: 3.00**

Additional Information

Students are encouraged to take advanced course work in BIO 410. Advanced Human Anatomy and ANTH 319. Human Osteology.

Pre-Law

Melinda Adams, Coordinator

Phone: (540) 568-3377

Email: adams2mj@jmu.edu

Students who plan to apply to law school may select their major from a wide range of fields, depending upon their interests. The scope of the law is broad

and offers room for individuals of varied educational and intellectual backgrounds. Students should choose courses that provide them with broad informational and cultural preparation and develop their reasoning abilities.

Especially valuable to a pre-law program are courses in:

- Communication, including composition, language and speech, which enable students to express themselves well.
- The humanities and social sciences, which help students to appreciate and perform effectively in their culture and society.
- Logic, mathematics and the natural sciences, which develop skills of fact discrimination, analysis and synthesis.
- Accounting and economics.

Also important to the pre-law program is Phi Alpha Delta, a student organization that organizes law-related activities.

Pre-Theological Studies

Robert Brown, Coordinator

Phone: (540) 568-5415

Email: brownre@jmu.edu

Students join the pre-theology program to prepare for careers in the service of religious communities. Usually, these careers—such as ministry, religious education, counseling and chaplaincy—require specialized training and graduate degrees from theological seminaries, rabbinical schools or university divinity schools. The pre-theology adviser guides students toward courses and experiential learning at JMU that will provide an academic foundation for graduate studies in theology as well as an opportunity to develop their practical skills or vocational gifts. Students in this program may major in any field, although the Association for Theological Schools recommends substantial pre-professional training in philosophy and religion.

In the Department of Philosophy and Religion, pre-theology students will find a robust offering of courses ranging from the interpretation of religious texts to theology and ethics, and from the histories of particular religious traditions to cross-cultural topics in global religion. Class assignments develop students' skills in critical thinking, ethical reasoning, scriptural hermeneutics, and written and oral communication, all of which theological schools highly value. The pre-theology adviser may direct students to relevant courses in foreign languages, social work, non-profit studies, humanitarian affairs, education or justice studies to complement their academic training in religion. Qualified students are encouraged to undertake independent studies or write honors theses in order to explore in greater depth the theological topics most important to them.

The department also offers students the opportunity to receive academic credit for practical supervised field work with social agencies and religious organizations in order to help students explore the particular forms of religious service they would like to pursue. Making connections with faith leaders within their own traditions helps students access larger networks of tradition-specific resources and contacts as they reflect on their goals and decide where to apply for further study in theology. We encourage students to visit various theological schools during the application season and to meet with representatives that the department invites to campus to discuss theology programs with students.

Environmental Programs

Website: <http://www.jmu.edu/environment>

At JMU, environmental study is embedded in a variety of disciplines. Students from throughout the university have the opportunity to study environmental issues by majoring in an environmental program or choosing a minor that complements any major.

Majors and Concentrations

Students wishing to major in a field that addresses the environment can choose from the following:

Biology, B.S.

The biology major offers a concentration in ecology and environmental biology.

Geology, Earth Science Major, B.A.

The B.A. in Earth science degree is designed to integrate all the Earth sciences in a systems approach to understanding the Earth.

Economics (Economics, B.A. Economics, B.B.A., and Economics, B.S.)

Students can pursue a concentration in environmental and natural resource economics within the economics major.

Engineering, B.S.

The JMU engineering program empowers and motivates students to engineer systems for sustainable societies.

Geography, B.S.

The geography science major, housed in the School of Integrated Sciences, offers a concentration in environmental conservation, sustainability and development.

Geology, B.S.

Within the geology major, students can select a concentration in environmental and engineering geology.

Integrated Science and Technology, B.S.

The ISAT major offers a concentration in environment.

Minors

Any of the environment minors may be taken in conjunction with any STEM (Science, Technology, Engineering and Mathematics) area major. They also

may be taken in conjunction with a major from any other JMU academic area in order to explore environmental issues from differing perspectives. The minor coordinators can assist a student in selecting a combination of major and minor study that best responds to a student's particular environmental interests and career goals.

Students should be aware that most minors have prerequisites, meaning that certain courses must be completed before a student can enroll in other courses. Consult with the minor adviser for additional information and recommendations for scheduling.

Environmental Humanities

This cross disciplinary minor allows students to articulate broad historical and cultural views of the complex interactions among humans and the natural and material environment. Students will analyze and produce expressive, creative work that illustrates the complexity of human interaction with the environment.

Environmental Information Systems

The cross disciplinary minor in environmental information systems is designed for undergraduates interested in using computer and information management technology to solve environmental problems and improve environmental stewardship.

Environmental Management

The cross disciplinary environmental management minor prepares students to apply the principles of environmental science and engineering to contemporary environmental problems in natural resource, industrial and public policy contexts. The minor is particularly suitable for students interested in professional careers in business, natural resources management, and environmental policy and planning.

Environmental Science

The cross disciplinary environmental science minor draws from courses that focus on the application of scientific concepts and principles to the understanding of environmental problems and their solutions. This is a multidisciplinary program that can be elected by any student. For example, students pursuing programs ranging from the physical, natural or social sciences, to education, journalism or business, all benefit from this broadly based environmental curriculum.

Environmental Studies

The cross disciplinary environmental studies minor provides a cross disciplinary education engaging socio-cultural, scientific and technical issues raised by the oft-conflicting needs and desires of globally interacting societies.

Centers

Center for Materials Science

Director: Samuel A Morton III

Phone: (540) 568-77623

Email: mortonsa@jmu.edu

Location: 1109 EnGEO, 801 Carrier Drive, MSC 4113

The Center for Materials Science at James Madison University was established in 1996 as a resource to integrate undergraduate education with basic and applied research in materials science. The center is a cross disciplinary

initiative of the College of Integrated Science and Engineering, the College of Science and Mathematics, and the Department of Engineering. Faculty in five different departments participate in the center. The center provides students the opportunity to develop broad cross disciplinary skills and knowledge in the science of materials.

Center for Health and Environmental Communication

Peter Bsumek

Email: bsumekpk@jmu.edu

Sharlene Thompson

Email: thompssr@jmu.edu

Website: <http://www.jmu.edu/chech/>

The Center for Health and Environmental Communication (CHEC) is housed in the School of Communication Studies. The CHEC utilizes the expertise of the school's faculty and students to facilitate original academic research, coordinate community outreach and advocacy projects, and serve as a community resource on matters related to understanding and improving public and private communication in the health and environmental contexts.

The CHEC recognizes that how we communicate is as important as what we communicate. Central to its mission is facilitating constructive and productive communication between experts and non-experts, between clients and providers, between communities, and between community members and decision makers.

JMU Farm

Faculty Sponsor: Carole Nash

Phone: (540) 568-6805

Email: nashcl@jmu.edu

The JMU Farm, located in Port Republic, consists of 12 hectares (30 acres) of second growth forest, 300 meters (1000 feet) of frontage on the North River (just upstream of the formation of the Shenandoah River) and an historic brick house. This facility is intended to:

- provide an ideal space in which to disseminate environmental information to school students and community groups.
- provide an inviting off-campus venue for workshops, meetings and symposia.

The facility can be reserved for JMU-related events by contacting the Office of Academic Resources at (540) 568-3744.

Research and Outreach Programs

Collaboration for Environment, Health and Safety

Website: <http://www.jmu.edu/cehs>

Office of Environmental Stewardship and Sustainability

Website: <http://www.jmu.edu/stewardship>

Independent Scholars Program

Scott Paulson, **Academic Unit Head**

Matthew Chamberlin, **Director**

Phil Frana, **Professor**

Phone: (540) 568-5218

Email: chambema@jmu.edu

Location: Gabbin Hall, Room 207

Mission

The mission of the Independent Scholars (IS) major is to provide students with a learning environment in which to develop and pursue self-designed curricular pathways and research goals, identifying unique domains of inquiry and interweaving multiple modes of thinking. Students are empowered to cultivate their own academic and professional interests in ways that foster the ability to comprehend and contribute uniquely and innovatively to a wide array of topics, questions and problems.

Objectives

IS majors will:

- develop topic-based interests and inquiry strategies to pursue those interests.
- enhance creativity, self-directedness and perseverance required for inquiry.
- learn research, technical and communication skills relevant to inquiry.
- enhance aptitude and confidence in working independently and collectively.
- apply knowledge and skills in experiential-learning settings.

Institute for Innovation in Health and Human Services

Linda Plitt Donaldson, **Director**

Phone: (540) 568-2642

Email: plittldlx@jmu.edu

Location: Campbell Building, 755 Martin Luther King Jr., Way

Website: <http://www.iihhs.jmu.edu>

Mission

IIHHS is an interdisciplinary community-engaged hub that brings together students, staff, faculty, and the community to advance a culture of health and equity through education, clinical practice, research, innovative programs and advocacy.

The following centers, programs and activities connect our campus with communities while advancing scholarship and achieving exceptional learning experiences.

Alvin V. Baird Attention and Learning Disabilities Center

Director: Trevor Stokes, stokestf@jmu.edu

The mission of the Alvin V. Baird Attention and Learning Disabilities Center is to develop and promote evidence-based interventions for children and adolescents with attention and learning challenges, while educating families, teachers, students and professionals about best practices for their assessment and treatment. Attention and learning factors are present across a range of developmental and psychological disorders, which are the focus of activities at the Baird Center. The Baird Center operates two clinics:

Applied Behavior Analysis – Parent Child Interaction Therapy Clinic (ABA-PCIT)

The Applied Behavior Analysis – Parent-Child Interaction Clinic provides assessment and treatment intervention services as well as parent consultation, training and support for children with behavioral and neurodevelopmental

disabilities such as autism, intellectual disability, attention deficit hyperactivity, oppositional defiant behavior, brain injury and cerebral palsy. The clinic is staffed by JMU faculty licensed as Behavior Analysts and Clinical Psychologists who work directly with children and families and also supervise students working in the clinic programs.

Interprofessional Autism Clinic (IPAC)

The Interprofessional Autism Clinic provides in-depth assessment and multi-disciplinary intervention for children ages 2-10 years old with Autism Spectrum Disorder or suspected Autism. The clinic is staffed with a licensed occupational therapist, a licensed speech and language pathologist, a licensed behavior analyst and clinical psychologist, in addition to graduate and undergraduate students enrolled in each of these academic programs. The clinic provides treatment as a simultaneous merge of methods from these disciplines while approaches are individualized to meet each child's unique needs.

Audiology Clinic

Director: Susan Ingram, ingramsb@jmu.edu

The James Madison University Audiology Clinic (JMUAC) is part of the university's teaching, research and community service programs. The JMUAC, within the Department of Communication Sciences and Disorders and supported by the Institute for Innovation in Health and Human Services, provides quality hearing healthcare and education to children and adults from the JMU community and surrounding areas. Services are provided by graduate students under the direction of licensed and certified Clinical Doctors of Audiology

Blue Ridge Area Health Education Center

Interim Director: Linda Plitt Donaldson, plittldx@jmu.edu

The Blue Ridge Area Health Education Center (AHEC) at JMU strives to improve the health of communities through education, collaboration and cooperation. It focuses on the health care needs of vulnerable populations. The AHEC fosters partnerships that utilize academic and community resources and directs these resources to health and human service gaps that exist within communities. The AHEC program has been a traditional link between academic health and human services programs and communities, utilizing student, faculty and other academic resources to the benefit of the communities. Students accepted into the **AHEC Scholars** program (juniors & seniors in majors with a clinical/field placement) receive additional course instruction and a stipend each semester. Contact the Program Director for information on how to apply.

Campus Suicide Prevention Center of Virginia

Director: Danette Gibbs, gibbsdc@jmu.edu

The goal of the Campus Suicide Prevention Center of Virginia is to reduce risk for suicide on Virginia's college and university campuses. Specifically, this program supports the individuals and teams on each campus as they work to build the infrastructure necessary to promote mental health for all students, identify and support those with mental health concerns, and effectively respond to individuals who are at risk for suicide.

Caregivers Community Network

Director: Kathy Guisewite, guisewkf@jmu.edu

In partnership with the Valley Program for Aging Services (VPAS), Community Network (CCN) provides services, companionship and support for those who care for frail older family members. CCN also provides services for those with memory loss or Alzheimer's disease. CCN can help to give caregivers a break and provide valuable time for attention to family concerns. Services are evidence-based and customized for each individual.

Counseling and Psychological Services

Director: Kelly Atwood, atwoodkc@jmu.edu

Counseling and Psychological Services (CAPS) is a teaching, research and service mental health clinic. CAPS offers affordable outpatient mental health services to the Harrisonburg and Rockingham County community while providing students in the Department of Graduate Psychology experience in assessment and treatment of psychological problems. CAPS is equipped to provide individual, couple and family therapy as well as to conduct intellectual and psychological assessments across the lifespan.

Brain Injury Connections

Director: Cindy Noftsinger, noftslia@jmu.edu

Brain Injury Connections, a partnership program, implements a multi-year region-wide grant to provide case management and supportive services to families and individuals recovering from brain injuries. It assists with access to services for re-learning daily living skills and with strategies for returning to school or work.

Futuro-Latino Drug Free Communities

Program Coordinator: Justin Garrido, garridjj@jmu.edu

Through a broad coalition of community, faith and school leaders as well as public officials, Futuro- Latino works to reduce and prevent alcohol and substance use among Latino youth throughout Harrisonburg and Rockingham County. The coalition evaluates local data to identify when and where potential underage drinking and drug use may occur and pursues a variety of environmental strategies to reduce availability and accessibility. The program supports development of youth leaders through national conferences as well as local leadership opportunities.

Healthcare for the Homeless Suitcase Clinic

Faculty Contact: Sharon Maiewski, maiewssf@jmu.edu

The Healthcare for the Homeless Suitcase Clinic provides health care at the point of contact in local shelters and human service agencies. Specifically, it provides on-site primary care services to homeless clients enrolled in local shelters while simultaneously providing case management services as needed. Staffed by a nurse practitioner and nurse case manager, this new model of healthcare delivery to homeless populations exemplifies a model of service that aims to break the cycle of homelessness by providing healthcare delivery with positive long term results.

Health Education Design Group

Director: Brent Finnegan, finne2bm@jmu.edu

The Health Education Design Group (HEDG) produces educational media in partnership with Virginia agencies and JMU programs. HEDG brings together

expert research and a skilled media production team to develop creative video and online educational and training materials for health-related projects. It also works with programs and agencies to plan and coordinate conferences and other live training sessions.

Healthy Families Page County (HFPC) & Healthy Families Shenandoah County (HFSC)

Program Director: JoLynne Bartley, bartl2jx@jmu.edu

Program Manager: Yvonne Frazier, frazieyh@jmu.edu

Healthy Families programs are based on a national program model and the two that operate in IIHHS provide education, resources and support for the most vulnerable first-time parents in Page and Shenandoah Counties through voluntary home visiting services.

Gus Bus Early Learning Program

Program Director: Jolynne Bartley, bartl2jx@jmu.edu

Program Coordinator: Rachel Gagliardi, gagliarl@jmu.edu

This initiative is a mobile literacy program serving low-income neighborhoods and day care centers in Harrisonburg, Rockingham County and Page County with a customized vehicle that provides a book exchange program, story time, nutritional support and resource referral information for families in need.

Interprofessional Services for Learning Assessment

Director: Kelly Atwood, atwoodkc@jmu.edu

The ISLA program offers diagnostic evaluation, consultation and support services for adults enrolled in a college or university. Evaluation teams consisting of professionals from clinical psychology, communication sciences, clinical neuropsychology, special education and nursing identify areas of need and design positive ways to promote meaningful learning and educational experiences.

Occupational Therapy Clinical Education Services

Interim Director: Julie Patrick Bonham, bonhamja@jmu.edu

A pediatric occupational therapy practice established to address a significant gap in locally available occupational therapy services, this clinic offers teaching, research, practice and service opportunities, and expands the interprofessional education and practice capacities of the university.

Page County Integrated PCBH Program

Director: Kelly Atwood, atwoodkc@jmu.edu

The Page county Integrated Primary Care and Behavioral Health Program is a partnership with IIHHS and Page Memorial Hospital (PMH) to integrate behavioral health and primary care services in a Rural Health clinic in Page County. This program provides interprofessional student education and training, research opportunities, and direct patient care using the integrated model. Behavioral health services include psychological testing and assessment, neuropsychological screening and testing, individual counseling and consultation with medical providers.

Precious Time Program

Faculty Director: Julianne Secrist, secrisjj@jmu.edu

Interim Program Director: JoLynne Bartley, bartl2jx@jmu.edu

The Claude Moore Foundation awarded this program grant funds to provide respite care to families who have special needs children. This respite program relies on students from nursing, social work, psychology, and other health and human service majors to provide caregivers with supportive assistance in meeting the demands of their family responsibilities.

Rural Engagement and Capacity Building Hub

Program Director: JoLynne Bartley, bartl2jx@jmu.edu

REACH Coordinator: Yvonne Frazier, frazieyh@jmu.edu

The REACH vision is to facilitate rural-led partnerships to promote community well-being. The purpose of REACH is to collaborate with rural communities, addressing their identified barriers and inequities in order to improve health and overall quality of life. REACH efforts will build on established projects and partnerships involving JMU faculty and staff, and over time, REACH will serve as a connection point and resource for community organizations, universities and others across the state to address the unique barriers to improving health and overall quality of life in rural communities.

Shenandoah Valley Child Development Clinic

Program Director: Kim Hartzler-Weakley, hartzlkm@jmu.edu

Clinic Director: Ginger Griffin, griffigl@jmu.edu

The Shenandoah Valley Child Development Clinic (CDC) provides individualized, cross disciplinary evaluations that may include medical, social work, nursing, educational, psychological, speech/language and audiology components depending upon the specialized needs of the child/adolescent.

Children/adolescents evaluated may have developmental, educational, emotional or behavioral concerns. The CDC provides care coordination services and assists families in decisions that address their developmental, educational, emotional or behavioral concerns. Services are provided on a sliding fee scale and Medicaid/FAMIS are accepted. Training opportunities are available in the CDC for students from a variety of disciplines.

Shenandoah Valley Migrant Education Program

Program Director: Jolynne Bartley, bartl2jx@jmu.edu

Program Coordinator: Nancy Resendiz, resendnx@jmu.edu

The Migrant Education Program provides free, supplemental education services to children and youth aged 3-21 of migrant and highly mobile agricultural workers. Services include tutoring/mentoring, school readiness initiatives, dropout prevention activities, educational interpretations (Spanish/English) and facilitation of families' stabilization in the community. The SVMEP serves as a point of contact for the Hispanic Services Council, a networking organization of agencies interested in the Latino population.

Speech-Language-Hearing Applied Laboratory

Director: Susan Ingram, ingramsb@jmu.edu

The JMU Speech-Language-Hearing Applied Laboratory, formerly referred to as the JMU Speech and Hearing Center, provides communication evaluation and treatment services to individuals with known or suspected speech and/or hearing impairments.

This center assists residents of the Shenandoah Valley ranging in age from infants to senior citizens. Hearing testing and aid advising is available for those with concerns regarding hearing. Evaluation and treatment of communication impairments, including speech, sound disorders, language impairments, voice disorders and stuttering problems, are additional services offered in the applied laboratory.

Graduate students supervised by faculty who are licensed audiologists or speech-language pathologists serve as clinicians in this lab.

Sexual Health Education Virginia (SexEdVA)

Director: Kim Hartzler-Weakley, hartzlkm@jmu.edu

Program Manager: Kayla McKean, mckeanka@jmu.edu

The SexEdVA initiative is a leader in supporting adolescent sexual health through training and technical assistance, curriculum development, research and advocacy across the Commonwealth of Virginia. Following are SexEdVA programs housed at the Institute:

- **Appalachian Replication Program (ARP)** works in collaboration with schools and community organizations to equip teens, caregivers and community members with the education and skills that allow young people to make the healthiest decisions for themselves when it comes to sex and relationships.
- **Disability Inclusive Sexual Health Network (DSHN)** connects and supports youth and organizations across Virginia as they develop and test innovative projects that advance sexual health education access — improving optimal health, preventing unplanned pregnancy and addressing sexually transmitted infections (STIs) — for youth with disabilities.
- **Personal Responsibility Education Program (PREP)** is a broad-based and collaborative effort that emphasizes both abstinence and contraception and addresses the adulthood preparation subjects of healthy relationships, parent-child communication, educational and career success, healthy life skills, and adolescent development in order to significantly reduce the number of teen pregnancies in Harrisonburg, Rockingham and Page counties of Virginia.
- **Sexual Risk Avoidance Education Program (SRAE)** implements strategies to build protective factors that promote healthy behaviors among young people ages 10-19 living in communities with disproportionately high rates of teen pregnancy.
- **Vision of You (VOY)** is an interactive, self-paced online sexuality education program that uses engaging video, animation, interactive components and gamification principles to provide information, skills and change sexual health behavior.

The Health Place

Director: JoLynne Bartley, bartl2jx@jmu.edu

The Health Place, a satellite of the Institute for Innovation in Health and Human Services, promotes collaborative and interprofessional health and human services that are affordable, accessible, responsive to and advance the health needs of Page County residents.

Waynesboro Outreach Program (Promotores de Salud)

Program Director: Azucena de Leon, deleo2ma@jmu.edu

The Waynesboro Outreach Program provides health promotion and education materials to raise awareness among Spanish speakers living in the Shenandoah River area about the impact of mercury found in the South River and South Fork Shenandoah Rivers and to provide education on how to reduce the risks associated with fish consumption.

Youth Data Survey

Director: Kim Hartzler-Weakley, hartzlkm@jmu.edu

IIHHS has been working with the community since 1996 to provide key data about local youth risk behaviors and produce information that enables the community to develop priority areas around youth issues. Every two years in the fall the survey is administered to half of all 8th, 10th and 12th graders in Harrisonburg City and Rockingham County and a report is published in the summer following survey administration.

Mahatma Gandhi Center for Global Nonviolence

Dr. Taimi Castle, **Director**

Phone: (540) 568-5929

Location: Darcus Johnson Hall 1005, MSC 1205

Email: GandhiCenter@jmu.edu; castletl@jmu.edu

Website: <https://www.jmu.edu/gandhicenter/index.shtml>

Mission

Our mission is to promote justice and nonviolence through education, scholarship and service.

Leadership

The Gandhi Center is led by a director who reports to the academic unit head of the Department of Justice Studies. The center is under the College of Arts and Letters and includes an internal and external advisory committee. The advisory committees composed of faculty and community members assist with fundraising and networking to support the center.

Teaching

The Gandhi Center brings students and faculty together for discussion, learning and outreach across disciplines, engaging faculty and students in the justice and nonviolence projects of the center. Faculty and community members support the educational and engagement missions of the center by providing regular workshops and seminars designed to advance the study and understanding of justice and nonviolence. The center works closely with groups across campus with similar goals and assists in sponsoring lectures during the annual Beitzel Lecture Series and Symposium. JUSTPEACE is a week of educational programming that began in 2022 and features presentations and workshops on a variety of justice topics.

Research

In 2021, the permanent site for the Justice & Nonviolence Research Lab was established in the Gandhi Center suite (DJH 1005A). The lab is a collaborative research space where interdisciplinary scholars research justice and peace into

action. The lab is home to the peer-reviewed, scholarly journal, the *International Journal on Responsibility*. The Gandhi Center also supports an annual research fellowship.

Student Interns

The Gandhi Center facilitates and supports a variety of initiatives. Over the years, student interns have implemented and organized events and programs such as gandhiFEST, Global Nonviolence Peace Camp for Children and Puppies for Peace. Student interns also manage marketing and social media for the center. Service with the Gandhi Center includes a diverse and varied set of activities focusing on both local and global community needs.

Volunteers and interns can join with existing programs or design their own program/project. We have some pressing local needs in the new Gandhi Center suite, such as organizing the Redekop library.

The Gandhi Award/Service Award

The Mahatma Gandhi Global Nonviolence Award is bestowed upon individuals with global recognition who believe humans everywhere are to be peacemakers, support nonviolence, love their enemies, seek justice, share their possessions with those in need, and express and demonstrate these beliefs in their words, life and actions. The inaugural award was given in 2007 to the Most Reverend Desmond Tutu, Archbishop Emeritus of Cape Town, South Africa and 1984 Nobel Peace Laureate. The second award was given in 2009 jointly to former U.S. President and 2002 Nobel Peace Laureate Jimmy Carter and former first lady Rosalynn Carter.

The Service Award is presented to a local community member who advanced nonviolence and social justice. In 2013 Dr. Vida Huber and Dr. Howard Zehr (Restorative Justice) were the inaugural recipients. PAX received the award in 2015.

The inaugural Mahatma Gandhi Center for National Nonviolence Award was bestowed on the Honorable John Lewis in 2021. David Hogg and March for Our Lives received the award in 2022.

The Gandhi Statue

The government of India presented a larger-than-life-size bronze statue of Mahatma Gandhi as a gift to the university in recognition of the work of the Gandhi Center. The statue was dedicated and unveiled on October 2, 2008, the International Day of Nonviolence and the birth anniversary of the Mahatma, by His Excellency Ronen Sen, Ambassador of India to the United States of America. The statue, which is located on the ground floor of JMU's Rose Library, was the first of Mahatma Gandhi in the Commonwealth of Virginia.

Military Science

Special Admission and Retention Requirements

Advanced military science courses are normally taken during the junior and senior years, or during graduate school. Qualified students pursuing a commission as a second lieutenant are contracted and paid a subsistence allowance of \$420 per month for up to 10 months during the school year. Prior

to commissioning, each cadet must successfully complete the four-week ROTC Cadet Summer Training (CST) at Ft. Knox, Kentucky. Cadets must maintain at least a 2.0 GPA, meet DoD medical fitness standards and meet Army physical fitness and weight control standards.

Program Requirements

This non-degree military science curriculum is divided into two phases:

Phase One: Basic Military Science

MSCI 100. Leadership Laboratory **Credits: 2.00** (two semesters)

MSCI 101. Introduction to Leadership and the Army **Credits: 2.00**

MSCI 102. Leadership Development Fundamentals **Credits: 2.00**

MSCI 200. Intermediate Leadership Laboratory **Credits: 2.00** (two semesters)

MSCI 201. Leadership Styles - Theory and Application **Credits: 2.00**

MSCI 202. Developing Leader Skills **Credits: 2.00**

Total: 16 Credit Hours

Note on basic military science

The basic course is open to all JMU students. There is no military obligation incurred for taking 100- and 200-level military science courses. This curriculum is designed to help students in the near-term as leaders on campus. The classes will also help students be more effective leaders in the long-term, whether they serve in the military or as leaders in civilian life. Topics addressed include problem solving, critical thinking, problem-solving methods, leadership theory, followership, group cohesion, goal setting, feedback mechanisms, physical fitness and land navigation.

Lessons are taught in a seminar format, emphasizing student discussions and practical exercises. Courses are open to all students with no prerequisites and no military obligation. Students must enroll in both the lab and the classroom instruction.

Placement credit for the basic course may be awarded through multiple programs including: prior military service, basic training, or successful completion of the ROTC summer leadership training course at Ft. Knox, Ky.

Phase Two: Advanced Military Science

MSCI 300. Advanced Leadership Laboratory **Credits: 3.00** (two semesters)

MSCI 310. Leading Small Organizations **Credits: 3.00**

MSCI 320. Developing Advanced Leader Skills **Credits: 3.00**

MSCI 400. Advanced Leadership Laboratory II **Credits: 3.00** (two semesters)

MSCI 410. Seminar Command Management **Credits: 3.00**

MSCI 420. Seminar on Officership Transition **Credits: 3.00**

Total: 24 Credit Hours

Note on advanced military science

The advanced course focuses on instruction and case studies which build leadership competencies and military skills in preparation for future responsibilities as Army officers and successful completion of the Leader Development Assessment Course (LDAC) at Ft. Knox, KY. Instruction includes the principles of war, decision-making processes, planning models and risk assessment. Advanced leadership instruction focuses on motivational theory, the role and actions of leaders, and organizational communications. Courses

are only open to advanced course-contracted cadets with prerequisites and a military obligation is incurred

Scholarships

Contact the department's enrollment officers at (540) 568-3633 for scholarship information.

Nelson Institute for International and Public Affairs

Tara Parsons, **Director**

Phone: (540) 568-7645

Location: Darcus Johnson Hall, Room 2009, MSC 1205

Email: parsontrn@jmu.edu

Website: <http://www.jmu.edu/nelsoninstitute>

Mission

Nelson Institute for International and Public Affairs is a concrete manifestation of James Madison University's commitment to meet both the educational requirements of its students in a changing world and its own need to respond to the "real world" challenges faced by society today.

Goals

The institute advances several university priorities:

- Offering quality academic programs.

- Being innovative in developing programs.
- Developing optimal student competencies in written and oral communication, critical thinking, information systems, and quantitative literacy.

Activities

The Nelson Institute Seminars provide justice studies majors and other interested JMU students the opportunity to engage in directed, practical, problem-solving exercises in the field of justice studies in small group ("task force") settings under the supervision of a faculty member.

The seminars provide a space where students are charged with finding a solution to a contemporary policy problem. They offer a unique opportunity for students to engage in policy-oriented research that integrates classroom instruction, out-of-class group learning activities, and civic engagement and service learning opportunities. The institute also provides students with the opportunity to present their findings to a regional or national audience.

As a complement to the seminars, the Nelson Institute brings guest speakers to JMU who are experts in the subject of the seminar to enhance the learning experience. Funding is made available to help students present their research at regional and national conferences as well as to travel to talk with government, NGO and private sector officials about the policy problem they are working on. Students present their results at a variety of venues including the College of Arts and Letters' student conference, Mad Rush, the conference organized by the Department of Foreign Languages and Literatures and Cultures, and regional conferences such as the Virginia Social Science Association meeting.

Course Descriptions

Accounting

ACTG 244. Accounting for Non-Business Majors

Credits 3.00 PeopleSoft Course ID 012593 Grading Basis GRD

For non-business majors only. This course introduces basic business and accounting topics such as revenue, investments, expenditures, liabilities, credit, cash management and taxation. Heavy emphasis is placed on the measurement of operating performance, and interpretation and use of accounting data for organizational decision-making. **Prerequisite(s):** *Non-business majors only. Junior standing or higher.*

ACTG 295. Accounting Ethics and Social Responsibility

Credits 3.00 PeopleSoft Course ID 013906 Grading Basis GRD

This course examines ethical perspectives and values in decision making for accountants from both philosophical and professional perspectives. Students analyze the nature of ethical dilemmas faced by accountants in making decisions and exercising responsibilities to the public. Students learn to apply professional guidance on ethics in accounting. **Prerequisite(s):** *Accounting major or minor. COB 242.*

ACTG 302. Introduction to the Profession: Role of Accountants

Credits 1.00 PeopleSoft Course ID 012298 Grading Basis GRD

This class relies heavily on discussions with practicing accountants in public accounting, industry and government. Topics include career preparation and the role of accountants in business and capital markets. Written assignments are used to enhance communication skills. **Prerequisite(s):** *Completion of both COB 241 and COB 242 with minimum grades of "B" in each and COB 300. Corequisite(s): COB 300.*

ACTG 303. Basic Spreadsheet Skills for Accountants

Credits 1.00 PeopleSoft Course ID 012574 Grading Basis GRD

This class provides students with hands-on learning and practice with basic Excel skills necessary in the workplace. Topics include creating and printing professional documents, navigating through workbooks, creating and editing formulas, using basic logical and statistical functions, and creating charts.

Prerequisite(s): *ACTG 302 or permission of the department head.*

Corequisite(s): *ACTG 302 or permission of the department head.*

ACTG 304. Advanced Spreadsheet Skills for Analysis and Reporting Accounting Information

Credits 1.00 PeopleSoft Course ID 012575 Grading Basis GRD

This class provides students with hands-on learning and practice with advanced Excel skills. This class focuses on preparing students to become Microsoft Certified Application Specialists in Excel. Topics include customizing charts, using advanced financial, logical, and statistical functions, pivot tables and pivot charts, evaluation of formulas, and collaboration of workbooks.

Prerequisite(s): *Completion of ACTG 303 with a minimum grade of "C-."*

ACTG 305. Spreadsheet Skills and Data Analysis for Accounting Information

Credits 3.00 PeopleSoft Course ID 014499 Grading Basis GRD

This course provides students the opportunity to learn and become proficient with spreadsheet and analytics skills expected by today's employers utilizing Microsoft Excel and Power BI analytics software. (May be taken with or after COB 242.) **Prerequisite(s):** *Accounting major or minor. Corequisite(s): COB 242.*

ACTG 310. Data Analytics for Accountants

Credits 3.00 PeopleSoft Course ID 010279 Grading Basis GRD

This course is an introduction to data analytics and the use of data analytics in various accounting settings. Topics include the data analytics mindset, data preparation, data quality, statistical analysis, and data visualization and reporting. (May be taken with or after COB 300). **Prerequisite(s):** *Accounting major, ACTG 305, minimum grade of "B-" in both COB 241 and COB 242; or permission of the department head. Corequisite(s): COB 300.*

ACTG 313. Accounting Information Systems

Credits 3.00 PeopleSoft Course ID 000188 Grading Basis GRD

This course covers the use of accounting systems for the collection, organization, analysis and reporting of accounting data. Topics include: internal controls, documentation of accounting systems, transaction processing cycles, auditing information technology, computer and information systems security, and integration of business functions in the accounting process.

Prerequisite(s): *Accounting majors only. COB 300, ACTG 305, and a minimum grade of "B-" in both COB 241 and COB 242; or permission of the department head.*

ACTG 343. Corporate Financial Reporting I

Credits 3.00 PeopleSoft Course ID 008363 Grading Basis GRD

This course provides a theoretical framework to explain and critically evaluate financial reporting by businesses. In addition to studying the authoritative standards for preparing financial statements, students develop the ability to read, use, analyze and interpret financial statements. Students gain an understanding that managers can shape the financial information communicated to investors and creditors. **Prerequisite(s):** *Accounting majors only. COB 300, ACTG 305, and a minimum grade of "B-" in both COB 241 and COB 242; or permission of the department head.*

ACTG 344. Corporate Financial Reporting II

Credits 3.00 PeopleSoft Course ID 005920 Grading Basis GRD

Continues the development of a theoretical framework to read, use, analyze, interpret, explain and critically evaluate financial reporting by businesses. Selected topics include financial instruments, corporate obligations, stockholders' equity and other corporate reporting issues. **Prerequisite(s):** *ACTG 343 with a minimum grade of "C-."*

ACTG 377. Federal Income Tax Accounting

Credits 3.00 PeopleSoft Course ID 000378 Grading Basis GRD

This course is designed to introduce students to the federal income tax system, including individual and business entity taxation. Topics include income, exclusions, deductions and property transactions. The course also facilitates development of research skills. **Prerequisite(s):** *Accounting majors only. COB 300, ACTG 305, and a minimum grade of "B-" in both COB 241 and COB 242; or permission of the department head.*

ACTG 410. Auditing and Assurance

Credits 3.00 PeopleSoft Course ID 003105 Grading Basis GRD

This course provides a study of techniques available for gathering, summarizing, analyzing and interpreting the data presented in financial statements and procedures used in verifying the fairness of the information. Course will also emphasize ethical and legal aspects and considerations.

Prerequisite(s): *ACTG 313 and ACTG 344. Corequisite(s): ACTG 344.*

ACTG 413. Cybersecurity and Accounting Information Protection Strategies

Credits 3.00 PeopleSoft Course ID 014503 Grading Basis GRD

This course will examine application of knowledge of internal controls over financial reporting to the operational area of cybersecurity. Topics include understanding best practices around IT governance and controls, applying knowledge of internal controls toward preventing cyberattacks of corporate information within ERP systems, evaluating the role of third-party service organizations and their control reports (SOC), and analyzing accounting disclosure strategies surrounding information protection controls and cybersecurity incidents. **Prerequisite(s):** ACTG 313.

ACTG 475. Strategic Cost Accounting and Analytics

Credits 3.00 PeopleSoft Course ID 003457 Grading Basis GRD

This course involves the study of cost accounting concepts and information used by business organizations to make strategic, organizational and operational decisions. Topics include the role of planning and control in attaining organizational goals and objectives; the relationship among cost structure, cost behavior and operating income; traditional and activity-based costing approaches to product and service costing; differential analysis in decision making; and ethical issues for accountants. Students will also engage in activities designed to enhance technological and communication skills. **Prerequisite(s):** ACTG 310.

ACTG 483. International Accounting and Financial Reporting

Credits 3.00 PeopleSoft Course ID 009037 Grading Basis GRD

Designed to develop a fundamental knowledge of the assumptions, environmental considerations and techniques underlying the collection and reporting of financial information on an international scale. **Prerequisite(s):** COB 300. Open to International Business Majors Only.

ACTG 490. Special Studies in Accounting

Credits 1.00 - 6.00 PeopleSoft Course ID 000355 Grading Basis GRD

Designed to give capable students in accounting an opportunity to do independent study under faculty supervision. Admission only by recommendation of the instructor and permission of the director.

ACTG 491. Advanced Data Analytics and Emerging Technologies in Accounting and Forensics

Credits 3.00 PeopleSoft Course ID 014504 Grading Basis GRD

This course focuses on advanced data analytics and skills focusing on data wrangling, advanced analysis and advanced visualizations. In addition, this course focuses on emerging technologies used in accounting and the business world as well as the impact of biases on decision making. **Prerequisite(s):** ACTG 310.

ACTG 499A. Honors

Credits 1.00 PeopleSoft Course ID 003009 Grading Basis GRD

ACTG 499B. Honors Thesis

Credits 3.00 PeopleSoft Course ID 003028 Grading Basis GRD

ACTG 499C. Honors

Credits 2.00 PeopleSoft Course ID 006384 Grading Basis GRD

African, African American and Diaspora Studies

AAAD 200. Introduction to African, African American and Diaspora Studies [C4GE]

Credits 3.00 PeopleSoft Course ID 011625 Grading Basis GRD

An introductory survey of basic theoretical concepts to analyze the Black experience, with special focus on the general historical process common to Africa and the African Diaspora. May be used for general education credit.

AAAD 300. Special Topics in African, African American and Diaspora Studies

Credits 3.00 PeopleSoft Course ID 013918 Grading Basis GRD

Examination of selected topics of importance to the field of African, African Americans and Diaspora studies.

AAAD 400. Advanced Topics in African, African American and Diaspora Studies
Credits 3.00 PeopleSoft Course ID 013142 Grading Basis GRD

Selected topics in African, African American and Diaspora studies are studied in depth. Course may be repeated when content changes.

AAAD 401. Internship in African, African American and Diaspora Studies

Credits 1.00-6.00 PeopleSoft Course ID 013821 Grading Basis GRD

This internship course provides the student with the opportunity to apply knowledge learned in the classroom in a practical/real-world setting(s). It prepares students for working independently in the field. Any internship experience must be approved by the internship coordinator in advance, and details of supervision and evaluation should be spelled out in advance by the supervising faculty member. If the internship is through an academic unit, it must be approved for credit by the African, African American and Diaspora Studies internship coordinator in advance of the experience.

AAAD 488. African American Art

Cross listed with: ARTH 488

Credits 3.00 PeopleSoft Course ID 012441 Grading Basis GRD

This course examines visual arts produced by people of African descent in the United States from the colonial period until the present. Course themes include debates about the relationship between racial identity and artistic production; the complex interchange between African American art and the cultural traditions of Africa and Europe; black artists' engagement with popular representations of African Americans; and the intersection of race with class, gender and sexuality. **Prerequisite(s):** AAAD 200, ARTH 206 or permission of the instructor.

AAAD 489. African, African American and Diaspora Studies Senior Research Experience

Credits 1.00 PeopleSoft Course ID 011626 Grading Basis GRD

In this research-oriented experience, students design and complete research projects relevant to their interests in African, African American and Diaspora studies, as well as connect their projects to previous course work and experiences within the AAAD studies minor. **Prerequisite(s):** AAAD 200, senior standing and permission of the instructor.

Air Force ROTC

AIRS 100. Leadership Laboratory

Credits 0.00-0.00 PeopleSoft Course ID 010938 Grading Basis CNC

This course is a mandatory laboratory in leadership and followership development for AFROTC cadets. As a complement to the air science classes, this laboratory focuses on applying leadership principles and understanding leaders' responsibilities while emphasizing the benefits of practical experience. JMU students will take AFROTC classes at the University of Virginia for JMU credit. Students must be enrolled in Air Force ROTC to take this course. **Corequisite(s):** Any Air Force ROTC class.

AIRS 110. Air Force Heritage and Values I

Credits 1.00 PeopleSoft Course ID 010930 Grading Basis GRD

This course introduces the United States Air Force and Air Force Reserve Officers Training Corps. Topics include mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities and communication skills. JMU students will take AFROTC classes at the University of Virginia for JMU credit. AFROTC cadets and students interested in joining Air Force ROTC must also register for AIRS 100, Leadership Laboratory.

AIRS 120. Air Force Heritage and Values II

Credits 1.00 PeopleSoft Course ID 010931 Grading Basis GRD

This course introduces the United States Air Force and Air Force Reserve Officers Training Corps. Topics include mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities and communication skills. JMU students will take AFROTC classes at the University of Virginia for JMU credit. **Corequisite(s):** *AIRS 100.*

AIRS 210. Team and Leadership Fundamentals I**Credits 1.00 PeopleSoft Course ID 010934 Grading Basis GRD**

This course is designed to provide a fundamental understanding of both leadership and team building. There are many layers to leadership, including aspects that don't always jump to mind. Such things include listening, understanding yourself, being a good follower, and problem solving efficiently. Students will apply these leadership perspectives when completing team building activities and discussing things such as conflict management. Students should demonstrate basic verbal and written communication skills. JMU students will take AFROTC classes at the University of Virginia for JMU credit. **Corequisite(s):** *AIRS 100.*

AIRS 220. Team and Leadership Fundamentals II**Credits 1.00 PeopleSoft Course ID 010932 Grading Basis GRD**

This course is designed to provide a fundamental understanding of both leadership and team building. There are many layers to leadership, including aspects that don't always jump to mind. Such things include listening, understanding yourself, being a good follower, and problem solving efficiently. Students will apply these leadership perspectives when completing team building activities and discussing things such as conflict management. Students should demonstrate basic verbal and written communication skills. JMU students will take AFROTC classes at the University of Virginia for JMU credit. **Corequisite(s):** *AIRS 100.*

AIRS 310. Leading People and Effective Communication I**Credits 3.00 PeopleSoft Course ID 010933 Grading Basis GRD**

This course studies leadership, management fundamentals and professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and communication skills required of Air Force junior officers. The class examines Air Force leadership and management situations, using case studies as a means of demonstrating and applying the concepts under consideration. JMU students will take AFROTC classes at the University of Virginia for JMU credit. **Corequisite(s):** *AIRS 100.*

AIRS 320. Leading People and Effective Communication II**Credits 3.00 PeopleSoft Course ID 010935 Grading Basis GRD**

This course studies leadership, management fundamentals and professional knowledge, Air Force personnel and evaluation systems, leadership ethics, and communication skills required of Air Force junior officers. The class examines Air Force leadership and management situations, using case studies as a means of demonstrating and applying the concepts under consideration. JMU students will take AFROTC classes at the University of Virginia for JMU credit. **Corequisite(s):** *AIRS 100.*

AIRS 410. National Security Affairs/Preparation for Active Duty I**Credits 3.00 PeopleSoft Course ID 010936 Grading Basis GRD**

This course examines the national security process, regional studies, advanced leadership ethics and Air Force doctrine. Topics include the military as a profession, officership, military justice, civilian control of the military, preparation for active duty and current issues affecting the military profession. JMU students will take AFROTC classes at the University of Virginia for JMU credit. **Corequisite(s):** *AIRS 100.*

AIRS 420. National Security Affairs/Preparation for Active Duty II**Credits 3.00 PeopleSoft Course ID 010937 Grading Basis GRD**

This course examines the national security process, regional studies, advanced leadership ethics and Air Force doctrine. Topics include the military as a profession, officership, military justice, civilian control of the military, preparation for active duty and current issues affecting the military profession. JMU students will take AFROTC classes at the University of Virginia for JMU credit. **Corequisite(s):** *AIRS 100.*

American Studies

AMST 200. Introduction to American Studies [C2HQC]**Credits 3.00 PeopleSoft Course ID 000059 Grading Basis GRD**

This interdisciplinary course will highlight the student's role in interrogating the cultural and political function of representations of America in literature, history, philosophy, religion, popular culture, music and art. Students will gain an understanding of why definitions of American identity matter and learn about the contemporary debates that inform the discipline of American Studies today. Questions about the changing role of national studies in the face of globalization are central. May be used for general education credit.

AMST 302. Immigrants in American Society**Credits 3.00 PeopleSoft Course ID 012187 Grading Basis GRD**

Immigrants today come to America from many countries, but because scholarly research had tended to concentrate on only a few of the largest nationality groups, the full range of immigrant experience has yet to be explored and documented. In this cross-disciplinary course, we will give special attention to two groups, Mexicans and Vietnamese, about whom much has been written, as examples of the varying ways that immigrants come to the U.S. and adapt to living here while maintaining important ties to their homelands and cultures. We will also consider the consequences of immigration for both the first and second generations of immigrants as well as for the communities that receive them, including the Central Shenandoah Valley.

Anthropology

ANTH 195. Cultural Anthropology [C4GE]**Credits 3.00 PeopleSoft Course ID 008081 Grading Basis GRD (C, R)**

An introduction to the nature of culture and its relationship to language, economics, politics, kinship and other institutions in diverse cultures. The course also provides an overview of the theories, methods and ethical responsibilities involved in the study of cultural systems and ethnographic writing. May be used for general education credit.

ANTH 196. Biological Anthropology [C3NS]**Credits 3.00 PeopleSoft Course ID 000362 Grading Basis GRD (B, R)**

An introduction to the origins, evolution and genetic variability of humans and their relationship to nonhuman primates. Examination of the fossil record, the relationship between biology and culture and human genetics are included. Theories and methods used in the study of biological anthropology are also introduced. May be used for general education credit.

ANTH 196L. Scientific Perspectives in Biological Anthropology [C3L]**Credits 1.00 PeopleSoft Course ID 014623 Grading Basis GRD**

This course provides a laboratory-based introduction to biological anthropology, covering topics including the origins, evolution and genetic variability of humans and their relationship to nonhuman primates. It is intended to be taken in conjunction with (or after) ANTH 196. Biological Anthropology [C3NS]. **Corequisite(s):** *ANTH 196.*

ANTH 197. Archaeology**Credits 3.00 PeopleSoft Course ID 003249 Grading Basis GRD (A, R)**

An introduction to the goals, methods and theory of anthropological archaeology. The course examines the variety of techniques archaeologists use to reconstruct the past from material remains. Archaeological ethics and the impact of the past on contemporary society are also considered.

ANTH 201. The Discipline of Anthropology

Credits 1.00 PeopleSoft Course ID 012212 Grading Basis GRD (R)

This required course introduces students to the subdisciplines of cultural, biological, linguistic and archaeological anthropology and the logic of their integration within the larger discipline of anthropology. Students will be introduced to current research questions within anthropology and how they are addressed from the perspective of the various subdisciplines. **Prerequisite(s):** *Major status or permission of the instructor. It is recommended that students have had at least one of the introductory-level ANTH courses (ANTH 195, ANTH 196 or ANTH 197).*

ANTH 205. Buried Cities, Lost Tribes: The Rise and Fall of Early Human Societies [C2HQC]

Credits 3.00 PeopleSoft Course ID 012176 Grading Basis GRD (A)

This course takes an archaeological and comparative perspective on the origins of human institutions, including art, architecture, religion, centralized political formations and urban life. The development and collapse of early societies in multiple world regions, including Mesopotamia, Egypt, the Indus Valley, Mesoamerica and the Andes will be explored. May be used for general education credit.

ANTH 250. Anthropology of the American Southwest

Credits 3.00 PeopleSoft Course ID 011586 Grading Basis GRD (A)

This course examines the development of Southwestern societies from early hunter-gatherers to the Native American communities of today. Major issues of anthropological interest, such as the adoption of agriculture, the development of village life, migration and abandonment, the spread of religious "cults," the extent of Mesoamerican influence and the effects of the Spanish conquest are explored.

ANTH 265. Peoples and Cultures of Latin America and the Caribbean

Credits 3.00 PeopleSoft Course ID 004423 Grading Basis GRD (C)

Anthropological and historical perspectives on the cultures of Latin America and the Caribbean through such themes as colonialism, nationalism, ethnicity, development, aesthetic traditions, gender, religion and urban and rural resistance movements.

ANTH 280. Peoples and Cultures of Sub-Saharan Africa

Credits 3.00 PeopleSoft Course ID 010840 Grading Basis GRD (C)

This is an introductory course emphasizing cultural diversity of sub-Saharan African societies. Basic anthropological concepts are used in analyzing African economics, political systems, marriage patterns and family organization, religious beliefs and the impacts of colonialism and post-colonial development practices.

ANTH 295. People and Cultures of East Asia

Credits 3.00 PeopleSoft Course ID 012357 Grading Basis GRD (C)

This introductory course examines the peoples and cultures of the core East Asian countries – China, Japan and Korea. The course is organized around anthropological perspectives on topics such as nationalism, consumption, gender, ethnicity and development but also emphasizes the cultural, social and historical characteristics of various groups in these nations, in addition to important cultural flows within region.

ANTH 300. The Anthropology of Food

Credits 3.00 PeopleSoft Course ID 000788 Grading Basis GRD (C)

This course explores anthropological approaches to food production, distribution, preparation and consumption in the contemporary world. Topics include food preferences and taboos, food and the senses, ritual and identity, technological risks, diet and nutrition, cuisine and class and the political economy of food. **Prerequisite(s):** *Any lower-level course in anthropology or permission of the instructor.*

ANTH 302. The Archaeology of Empires and Rebels

Credits 3.00 PeopleSoft Course ID 014417 Grading Basis GRD (A)

This course examines empires and rebels from an archaeological perspective. Students will survey major empires of the past and how they were challenged by acts of resistance, revolts and rebellions. Some of the major empires covered will include the Inca Empire, the Roman Empire, the Qin Empire, the Assyrian Empire and the Aztec Empire. In this discussion-based course, students will review how archaeologists have uncovered state strategies of control as well as resistance to those forms of control by different groups in those empires.

ANTH 303. Andean Archaeology

Credits 3.00 PeopleSoft Course ID 014418 Grading Basis GRD (A)

This course provides an overview of Andean archaeology. The time period ranges from the arrival of the first settlers of the Andes to the mighty Inkas. The Andes contain the highest and densest variety of microclimates in the world, ranging from scorching deserts to humid rainforests. A land of contrasts and extremes, it is also the setting for diverse peoples who eked out a living from the land, developed unique political systems and passed down rich symbolic knowledge from one generation to another. The main purpose of the course is to understand these peoples: how they interacted with one another, how they interacted with their environment and how they made society.

ANTH 305. Language and Culture

Cross listed with: SCOM 305

Credits 3.00 PeopleSoft Course ID 012175 Grading Basis GRD (C)

An introduction to linguistic anthropology. Explores the complex relationships between language and culture through topics such as language acquisition and socialization; language, thought and worldview; language and identity; multilingualism; how and why languages change; literacy; and the politics of language use and language ideologies.

ANTH 306. Japanese Society and Culture

Cross listed with: SOCI 306

Credits 3.00 PeopleSoft Course ID 013685 Grading Basis GRD (C)

This introductory course takes a critical and interdisciplinary approach to exploring Japan. We will apply Sociological, Anthropological, and Demographic perspectives to comparatively understand, analyze, and discuss Japanese society and culture. Students will read and discuss issues related to history, socio-demographic change, gender, work, social class, race/ethnicity, family, health care, and aging in Japanese society.

ANTH 307. Climate, Culture and Change

Credits 3.00 PeopleSoft Course ID 013897 Grading Basis GRD (A)

This course explores the implications of climate change for human cultures. The overall perspective will be historical, but the relevance of past experiences to contemporary circumstances will be under constant discussion. A series of case studies drawn from archaeological and historical records will attest to a range of possible human responses, including examples that involve both naturally- and culturally-induced change. Students will be introduced to the fundamentals of paleoclimatology, such as basic processes that influence climate change, as well as the sources of long-term climate records. Under an anthropological perspective, students will also become acquainted with the

range of documented human reactions to climate change and their ramifications. Each case study will be addressed in three parts over the course of two class sessions: lecture/presentation, discussion and supplemental analysis.

ANTH 311. Archaeology of Virginia

Credits 3.00 PeopleSoft Course ID 013898 Grading Basis GRD (A)

A comprehensive survey of human experience in the Old (Old!) Dominion. Archaeological discoveries in Virginia, ranging from evidence of Ice Age pioneers to colonial-era plantations, will be the basis for charting wider cultural developments in eastern North America. Through these cases, basic archaeological principles, methods and theories will be reinforced. Activities and assignments will involve manipulation of original archaeological data using basic quantitative analysis. The course will also feature profiles of prominent Virginia archaeologists and sites, as well as an overview of the discipline as it is practiced in the state today. ANTH 197 is recommended, though not required.

ANTH 312. The Native Americans

Credits 3.00 PeopleSoft Course ID 004378 Grading Basis GRD (A)

A study of the nature of Indian societies occupying different environmental areas of North America at the time of earliest historic contact. Indian groups such as Shawnee, Mandan, Nuunamit, Natchez, Creek, Iroquois and Sioux will be considered.

ANTH 315. Human Evolution

Credits 3.00 PeopleSoft Course ID 007346 Grading Basis GRD (B)

Discusses the emergence of the hominids as a lineage distinct from other apes. Provides evidence for the evolution of bipedalism, tool use, hunting/gathering, major increases in brain size, language and material culture and the hypotheses that have been developed to explain the emergence of these characteristics

Prerequisite(s): ANTH 196, or BIO 140/BIO 140L and BIO 150/BIO 150L, or permission of the instructor.

ANTH 316. Human Evolutionary Psychology

Credits 3.00 PeopleSoft Course ID 012896 Grading Basis GRD (B)

An exploration of human behavior from an evolutionary perspective. Emphasis is placed on the critical evaluation of adaptive hypotheses purported to explain fundamental human behaviors such as survival and mating strategies, reproduction and parenting, kinship and cooperation, dominance and aggression, cultural evolution and religion. **Prerequisite(s):** ANTH 196 or permission of instructor.

ANTH 317. Primate Evolutionary Ecology

Credits 3.00 PeopleSoft Course ID 013118 Grading Basis GRD (B)

This course explores the interface between an organism and its environment, illustrated with examples from the primates. Behaviors related to feeding, moving, grouping and socializing are considered from an evolutionary perspective. Topics to be discussed include feeding ecology, functional anatomy, the ecology of primate social systems, ranging behaviors, community ecology and the role humans play in shaping primate communities.

Prerequisite(s): ANTH 196 or permission of instructor.

ANTH 318. The Evolution of Primate Sexuality and Reproduction

Credits 3.00 PeopleSoft Course ID 013240 Grading Basis GRD (B)

A survey of non-human primate sexuality from an evolutionary perspective. Emphasis is placed on the diversity of behavioral, anatomical and physiological aspects of mating and reproduction across the order Primates. Where appropriate, comparisons with human sexuality are made. **Prerequisite(s):**

ANTH 196 or permission of instructor.

ANTH 319. Human Osteology

Credits 3.00 PeopleSoft Course ID 013366 Grading Basis GRD (B)

An analysis of the individual bones and teeth that comprise the human skeleton. Emphasis is placed on learning individual bones and teeth as well as the numerous osteological and dental landmarks that characterize them. Applied topics such as bone growth and the analysis of age, sex, stature, pathology and geographic ancestry will also be addressed.

Prerequisite(s): ANTH 196 or permission of the instructor

ANTH 323. Anthropology and Photography

Credits 3.00 PeopleSoft Course ID 012110 Grading Basis GRD (C)

This course explores the anthropological use of photographic data for the description, analysis, communication and interpretation of human behavior. Topics include phenomenological, cross-cultural and historical understanding of still photography; the social life of photographs; visual cultural production and the consumption of photographs; and still photography after colonialism, globalization, and postmodernity.

ANTH 324. Mindfulness and Anthropology

Credits 3.00 PeopleSoft Course ID 013826 Grading Basis GRD (C)

Mindfulness provides ways of attending to the world in its present moment in a nonjudgmental manner. Students study and practice contemporary mindfulness practices, while applying these techniques to the holistic collection, analysis and presentation of ethnographic data. The course considers recent ethnographic practice and theory in the context of mindfulness, including the anthropology of poetic expression, the senses and embodied experience.

Prerequisite(s): ANTH 195 or permission of the instructor.

ANTH 325. Aztec, Maya and Their Predecessors

Credits 3.00 PeopleSoft Course ID 005815 Grading Basis GRD (A)

Survey of the Olmec, Toltec, Teotihuacan, Maya and Aztec civilizations and the factors leading to their development, persistence and decline.

ANTH 327. Ancient North American Civilizations

Credits 3.00 PeopleSoft Course ID 010332 Grading Basis GRD (A)

Studies the emergence of Native American societies prior to historic contact. Emphasizes prehistoric developments in the eastern United States.

ANTH 331. Historical Archaeology

Cross listed with: HIST 331

Credits 3.00 PeopleSoft Course ID 010841 Grading Basis GRD (A)

The course introduces students to the purposes, subject matter, methodology and historical background of the discipline of historical archaeology. Building on research issues and methodologies of anthropological archaeology and history, the multidisciplinary aspects of this field are introduced through field trips, projects, guest lectures, readings and classroom presentations.

ANTH 350. Magic, Witchcraft and Religion

Credits 3.00 PeopleSoft Course ID 006362 Grading Basis GRD (C)

Anthropological study of religion in society. The influence of religion on the development of social, legal, governmental and economic aspects of culture is emphasized.

ANTH 352. Birth, Death, Sex: Exploring Demography

Cross listed with: SOCI 352

Credits 3.00 PeopleSoft Course ID 001047 Grading Basis GRD

Fertility (birth) and mortality (death) and their biological and social determinants in cross-cultural and evolutionary/historical frameworks. Exploration of the dynamic between the material constraints on and symbolic significance of reproduction, sexuality and death within a cultural context. Critical examination of population growth as a global "problem." Basic demographic methods.

ANTH 360. Medical Anthropology

Credits 3.00 PeopleSoft Course ID 003108 Grading Basis GRD (C)

This course takes an anthropological approach to the study of health, illness and healing; how do different cultural systems and social institutions influence the experience and interpretation of different bodily states? Material covers critical analyses of Western medicine and ethnomedicine in both specific cultural settings and their global circulation. Topics include disease epidemics, illness narratives, public health, suffering, pharmaceuticals, disability and health care systems. **Prerequisite(s):** *ANTH 195 or permission of the instructor.*

ANTH 364. U.S./Latin American Borders

Credits 3.00 PeopleSoft Course ID 010599 Grading Basis GRD (C)

This course examines the experiences of Latin American migrants to the United States. It stresses the cultural expression of those experiences, globalization and its effects on local communities in Latin America, the U.S. responses to migration and migrants.

ANTH 366. Anthropology of War

Credits 3.00 PeopleSoft Course ID 011587 Grading Basis GRD (A, C)

This course examines the causes, conduct and consequences of warfare in non-state societies using both ethnographic and archaeological data. Case studies drawn from throughout the world are used to examine topics such as the co-evolution of war and society, the impact of colonialism on native warfare, the process of making peace and claims about the biological "inevitability" of war.

ANTH 368. Contemporary American Culture

Cross listed with: *SOCI 368*

Credits 3.00 PeopleSoft Course ID 000316 Grading Basis GRD (C)

This course analyzes contemporary American society in relation to popular cultural formations and representations. Cultural expressions found in music, literature, theatre, film, television, cyberspace and sports will be examined with respect to values, sentiments, identity constructions and lived experiences of differentially situated social actors.

ANTH 370. Topics in the Anthropology of Gender

Credits 3.00 PeopleSoft Course ID 010844 Grading Basis GRD (C)

This course examines the many ways in which gender is constructed and negotiated in different historical and social contexts. Topics will vary with the instructor to include both cultural and biocultural perspectives.

ANTH 375. Anthropological Theory

Credits 3.00 PeopleSoft Course ID 007521 Grading Basis GRD (C, R, W)

This course introduces the major social theories and debates that inform anthropological analysis. Special emphasis is given to their analytical or explanatory power for understanding human behavior and our cultural and social worlds, the contexts in which they were produced, and their contributions to ongoing debates. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** *ANTH 195 and junior standing.*

ANTH 376. Anthropology of Reproduction

Credits 3.00 PeopleSoft Course ID 013742 Grading Basis GRD (C)

This course provides students with a critical and cross-cultural perspective on human reproduction. Examining how individuals draw on social and symbolic resources to sort out complicated private decisions, we will discuss how reproductive experiences are embedded in local, national and transnational politics. Topics covered may include: cross-cultural perspectives on childbearing and childlessness, kinship, and the globalization of new reproductive technologies such as in vitro fertilization. **Prerequisite(s):** *ANTH 195 or permission of the instructor.*

ANTH 377. Space/Culture/Power

Credits 3.00 PeopleSoft Course ID 013241 Grading Basis GRD (C)

An introduction to social-scientific approaches to space. We will think critically about how people across cultures shape—and are shaped by—the spaces we occupy. Drawing on examples from around the world we examine the intersections of space, culture and power through such topics as segregation, maps, architecture, prisons, schools, migration politics and more. The course encourages students to think of space—and its intersections with culture and power—in new and sophisticated ways. **Prerequisite(s):** *ANTH 195.*

ANTH 388. Prisons, Punishment and the State

Cross listed with: *SOCI 388*

Credits 3.00 PeopleSoft Course ID 013863 (C)

The course investigates the nature of punishment and the particular forms of punishment meted out by the state. Questions include: What is the purpose of punishment? Why does the state choose incarceration as its standard punishment? What forms of punishment exist in other cultures? We focus on the contexts in which prisons emerged in the US and what they say about our society. Discussions center on power, race, class, gender, age and the political economics of the criminal justice system. **Prerequisite(s):** *ANTH 195 or permission of the instructor.*

ANTH 389. Ethnographic Experience in Dominica

Credits 3.00 PeopleSoft Course ID 013600 Grading Basis GRD (C)

This course is an anthropological case study of Dominica, an independent postcolonial island nation in the Eastern Caribbean. The course entails extensive background study of the island's history, culture and languages, combined with hands-on ethnographic, service-learning and cross-cultural experiences during an Alternative Spring Break in Dominica. **Prerequisite(s):** *Permission of the instructor.*

ANTH 390. Topics in Cultural Studies

Cross listed with: *SOCI 390*

Credits 3.00 PeopleSoft Course ID 011609 Grading Basis GRD (C)

This course explores contemporary culture through a "cultural studies" lens, an interdisciplinary perspective interested in using empirical knowledge to encourage more just human relations. Specific topics of investigation will vary by semester, but each course will cover cultural studies' intellectual history and its application to cultural expressions found in everyday life, film, music and text.

ANTH 391. Study Abroad

Credits 1.00 - 6.00 PeopleSoft Course ID 011267 Grading Basis GRD (May be A, B, C, F)

Designed to encourage students to enhance their academic programs through studying abroad. Arrangements must be made with a faculty member who will direct the study with preparatory instructions and final requirements. May be repeated up to 12 credits.

ANTH 395. Special Topics in Anthropology

Credits 3.00 PeopleSoft Course ID 002632 Grading Basis GRD (May be A, B, or C)

Examination of selected topics which are of current importance to anthropology. May be repeated for credit when course content changes.

ANTH 405. Topics in Linguistic Anthropology

Credits 3.00 PeopleSoft Course ID 012895 Grading Basis GRD (C)

Examines current issues in the anthropology of language. Topics vary by semester, but each course will include hands-on analysis of social interaction and/or investigation of contemporary case studies of language policy, ideologies and use.

ANTH 410. Spatial Analysis for Anthropologists

Credits 4.00 PeopleSoft Course ID 011954 Grading Basis GRD (A, B or C)

The course teaches students how to identify and solve anthropological problems with spatial dimensions. Hands-on experience is stressed in the acquisition, analysis and display of spatial data using Geographic Information Systems software. Topics include the mapping of race and ethnicity, the spatial distribution of cultural variables and human modification and use of the landscape. **Prerequisite(s):** ANTH 195, ANTH 196 or ANTH 197.

ANTH 411. Topics in Ethnographic Film

Credits 3.00 PeopleSoft Course ID 013601 Grading Basis GRD (C)

An examination of current issues in the study of ethnographic film. The course studies the changing role, practice and methods of film in anthropological research and scholarship. Topics include methods and genres of ethnographic film composition; the scientific status of filmed data; cross-cultural visual literacies; narrative form as social scientific inquiry; film and sensory data; sound, subtitles and translations; "indigenous media;" and audience reception

Prerequisite(s): ANTH 195 or permission of the instructor.

ANTH 415. Anthropological Genetics

Credits 3.00 PeopleSoft Course ID 012905 Grading Basis GRD (B)

Surveys the theory and methods of evolutionary genetics as applied to human evolution and human diversity. Emphasizes human evolution as illuminated by genetics, as well as the intersection of human genetics with social issues such as racism, bioethics and eugenics. **Prerequisite(s):** ANTH 196.

ANTH 430. Primate Conservation Biology

Credits 3.00 PeopleSoft Course ID 012985 Grading Basis GRD (B)

A discussion-based course that examines the impact of human activities on biodiversity, with an emphasis on the primates. Concepts and theories in conservation biology will be explored and applied to understanding the threats to wild primates and evaluating conservation strategies. Cultural and political perspectives and philosophical and ethical arguments for conserving biodiversity will also be considered. **Prerequisite(s):** ANTH 196 or BIO 250/BIO 250L or permission of the instructor.

ANTH 435. Ethnographic Genres and Methods

Credits 4.00 PeopleSoft Course ID 004022 Grading Basis GRD (C, F)

Explores ethnographic methods and conventions of ethnographic writing through close reading, analysis and production of ethnographic texts. Students develop critical skills in assessing ethnographic practice by examining how ethnographies are shaped by authors' fieldwork experiences, intellectual traditions and theoretical perspectives. Students engage in fieldwork and craft their own ethnographic accounts. **Prerequisite(s):** ANTH 375.

ANTH 436. Afro-Latin America

Cross listed with: HIST 436

Credits 3.00 PeopleSoft Course ID 012174 Grading Basis GRD (C)

Latin America and the Caribbean were the first and largest parts of the Western Hemisphere to be populated by Africans. Afro-Latin America examines cultural formations Africans brought to these regions. Beginning with an overview of the slave trade, it examines the histories of Africans and African-descent people throughout Latin America, as well as contemporary Afro-Latin American culture(s). **Prerequisite(s):** One course in either Latin American or Africana studies (any discipline); upper-division status or permission of the instructor.

ANTH 445. Methods and Research Perspectives in Biological Anthropology

Credits 4.00 PeopleSoft Course ID 014172 Grading Basis GRD (B)

This course explores current research topics and methods in biological anthropology. Students will learn to write scientifically and critically evaluate the peer-reviewed literature and will receive training in data collection, analysis, interpretation and presentation. **Prerequisite(s):** ANTH 196 and ANTH 375, or permission of instructor. **Corequisite(s):** ANTH 375.

ANTH 455. Archaeology: Methods of Analysis and Interpretation

Credits 4.00 PeopleSoft Course ID 009781 Grading Basis GRD (A, F)

A review of the nature of inquiry, recent theory and the means by which archaeologist acquire, analyze and interpret their data. In addition to practical training in methods of analysis used in contemporary practice, students will gain experience in designing, conducting and reporting archaeological research. **Prerequisite(s):** ANTH 195, ANTH 197 and one upper-level archaeology elective.

ANTH 485. Anthropology Course Assistantship

Credits 1.00 - 3.00 PeopleSoft Course ID 005867 Grading Basis GRD

Students participate as course assistants in anthropology. Assistantships provide students with a sense of what it is like to teach an anthropology course by allowing them to work closely with faculty members through different phases of course preparation, presentation and evaluation. Assistantships also allow for a deeper understanding of course material by providing opportunities for student assistants to lead discussion and to help their peers review the material outside of the classroom. **Prerequisite(s):** Students must have junior /senior standing, must have earned a minimum grade of "B" in the course for which they will serve as assistant and may register by faculty invitation only. May be repeated up to six credits; only three credits can count toward the major. A student may only serve as a course assistant to the same course twice.

ANTH 486. Internship in Anthropology

Credits 1.00 - 6.00 PeopleSoft Course ID 011434 Grading Basis GRD (May be A, B or C)

Designed to encourage students to enhance their academic programs by employing and refining anthropological skills through internships in public or private agencies. Arrangements must be made with a faculty member who will oversee the internship. **Prerequisite(s):** By permission only. May be repeated up to six credits.

ANTH 490. Special Studies in Anthropology

Credits 1.00 - 3.00 PeopleSoft Course ID 001025 Grading Basis GRD (May be A, B or C)

Course offers students an opportunity to do independent study under staff supervision. **Prerequisite(s):** Admission only by recommendation of the instructor. More than one repeat requires department head approval.

ANTH 492. History from Things: Material Culture

Cross listed with: ARTH 492, HIST 492

Credits 3.00 PeopleSoft Course ID 011024 Grading Basis GRD (A)

This course explores the multidisciplinary "field" of material culture studies and the ways of looking at and learning from objects, things, or "stuff," ranging from furniture and teapots to houses and farmyards. It examines how scholars from a variety of disciplines have used material culture in their work. Readings draw from multiple sources, approaches and methodologies, reflecting the interdisciplinarity of the field.

ANTH 494. Field Techniques in Archaeology

Credits 4.00 - 8.00 PeopleSoft Course ID 000416 Grading Basis OPT (A, F)

Laboratory course directed at teaching students the basic field techniques and procedures of historic and prehistoric archaeology. Classroom lectures will present techniques and relevant aspects of method and theory.

ANTH 494A. Field Tech in Archeology

Credits 4.00 - 8.00 PeopleSoft Course ID 003011 Grading Basis GRD

ANTH 496. Research Thesis

Cross listed with: HIST 496

Credits 3.00 PeopleSoft Course ID 011612 Grading Basis GRD (A)

Students will gather, analyze and interpret archaeological/historical data over two semesters. Students will work on a project that demonstrates theory, research design, data gathering and analysis, culminating in a written thesis. The course meets the capstone requirement for the historical archaeology minor but is also available to students in history and anthropology.

Prerequisite(s): Junior or senior standing.

ANTH 499. Honors Thesis

Credits 6.00 PeopleSoft Course ID 006434 Grading Basis GRD (May be A, B, or C). Three Semesters

An independent research topic initiated and completed by qualified senior majors who want to graduate with distinction.

ANTH 499A. Honors

Credits 1.00 PeopleSoft Course ID 009631 Grading Basis GRD

ANTH 499B. Honors

Credits 3.00 PeopleSoft Course ID 002481 Grading Basis GRD

ANTH 499C. Honors

Credits 2.00 PeopleSoft Course ID 005293 Grading Basis GRD

Arabic

ARAB 101. Elementary Arabic I

Credits 4.00 PeopleSoft Course ID 011757 Grading Basis GRD

The fundamentals of modern standard Arabic through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. If a student has had two or more years of the language in high school, he/she will not receive credit for the course.

ARAB 102. Elementary Arabic II

Credits 4.00 PeopleSoft Course ID 011758 Grading Basis GRD

The fundamentals of modern standard Arabic through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. If student has had two or more years of the language in high school he/she will not receive credit for the course. **Prerequisite(s):** ARAB 101.

ARAB 103. Survival Arabic

Credits 4.00 PeopleSoft Course ID 014587 Grading Basis GRD

The course is designed to help students speak Arabic with confidence while visiting or living in an Arabic country. Besides gaining basic knowledge in reading and writing in Arabic, students will attain communicative skills to enable them to engage in a variety of activities and situations. Emphasis is on cultural competence and interaction skills. Seniors and ROTC students are encouraged to take this class. Does not fulfill the B.A. language requirement.

ARAB 109. Accelerated Review of Elementary Arabic

Credits 3.00 PeopleSoft Course ID 013602 Grading Basis GRD

Reviews elementary Arabic grammar, reading, writing, speaking and listening skills in Arabic. One hour of work a week in the language laboratory. For students who have had no more than two or three years of Arabic in high school and qualify through the placement exam. Native speakers are excluded.

Prerequisite(s): Permission of the department head or sufficient score on the foreign language placement exam.

ARAB 111. Intensive Arabic I

Credits 6.00 PeopleSoft Course ID 011792 Grading Basis GRD

The fundamentals of Arabic through intensive listening, speaking, reading and writing. This four-week course is the equivalent of ARAB 101 -ARAB 102.

ARAB 212. Intensive Arabic II

Credits 6.00 PeopleSoft Course ID 011793 Grading Basis GRD

A thorough review of grammar, vocabulary building, conversation, composition and reading at the intermediate level. This four-week course is the equivalent of ARAB 231-ARAB 232. **Prerequisite(s):** ARAB 102, ARAB 109 or ARAB 111, or permission of the instructor.

ARAB 231. Intermediate Arabic I

Credits 3.00 PeopleSoft Course ID 011755 Grading Basis GRD

A thorough review of first-year grammar and vocabulary building.

Conversation, composition and reading will be chosen to reach competency at the lower intermediate level Arabic. **Prerequisite(s):** ARAB 102, ARAB 109 or ARAB 111, or permission of the instructor.

ARAB 232. Intermediate Arabic II

Credits 3.00 PeopleSoft Course ID 011756 Grading Basis GRD

A thorough review of grammar and vocabulary building, conversation, composition and reading. **Prerequisite(s):** ARAB 231 or permission of the instructor.

ARAB 300. Arabic Grammar and Communication

Credits 3.00 PeopleSoft Course ID 012153 Grading Basis GRD

Intensive training in grammatical structures and their application to oral and written communication. Instruction is in Arabic. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** ARAB 212 or ARAB 232 or permission of the instructor.

ARAB 307. A History of Islamic Civilization 600-1600 A.D.

Credits 3.00 PeopleSoft Course ID 013100 Grading Basis GRD

This course is a study of society, economics, politics, culture and the arts of the Islamic world from the rise of Islam to the establishment of the gunpowder empires (Ottoman, Safavid, and Mughal). Instruction is in English.

ARAB 308. Contemporary Islamic Civilization

Credits 3.00 PeopleSoft Course ID 013101 Grading Basis GRD

A study of society, economics, politics, culture and the arts of the Islamic world, with a focus on the Arabic-speaking regions, from 1700 A.D. to the present. Instruction is in English.

ARAB 320. Arabic Oral and Written Communication

Credits 3.00 PeopleSoft Course ID 012154 Grading Basis GRD

Intensive training in the use of modern, everyday Arabic with emphasis on conversation and composition. Readings in Arabic will provide a context for discussion and writing. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 330. Business Arabic

Credits 3.00 PeopleSoft Course ID 012446 Grading Basis GRD

A study of commercial and trade vocabulary and customs in conjunction with practice in commercial communication, including letter writing, interviews and interpretations. Instruction is in Arabic. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 339. Literatures of the Islamic World 600-1500 A.D.

Credits 3.00 PeopleSoft Course ID 012987 Grading Basis GRD

A thorough analysis of selected passages from important authors from early Arabic and Persian literature up to the beginning of the 16th century AD. The material studied will include Arabic poetry and prose from the period just before the rise of Islam to about 1500, and Persian poetry and prose from the spread of the use of New Persian in the 10th century to about 1500. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 340. Intermediate Arabic Conversation

Credits 3.00 PeopleSoft Course ID 012486 Grading Basis GRD

Course emphasizes oral communication at the intermediate level. Students will use the vocabulary they have learned in the previous Arabic language classes.

In addition, students will acquire new vocabulary from in- and out- of class conversational situations. **Prerequisite(s):** ARAB 212 or ARAB 232 or permission of the instructor.

ARAB 371. Advanced Arabic Grammar and Translation

Credits 3.00 PeopleSoft Course ID 013102 Grading Basis GRD

Arabic/English translation applied in several fields. In this course students analyze the main grammatical differences between Arabic and English with the focus on producing accurate and idiomatic translations into both languages.

Prerequisite(s): ARAB 300 or permission of the instructor.

ARAB 375. Business and Society in the Arab World

Credits 3.00 PeopleSoft Course ID 014586 Grading Basis GRD

This course provides an introduction to the society, economy and political history from colonialism, through independence and up to the present of the twenty-two countries that are members of the Arab League (Jāmi'at al-Duwal al-'Arabiyya). The creation and development of the political, health and education systems and the ethnic and religious diversity of each country will be presented as well as the political problems and territorial disputes that they may be involved in. Business practices and the economies will be analyzed with a focus on the imports and exports of each country, the development of agriculture and fishing, the tourism industry (including medical tourism), financial institutions and banking (including Islamic banking and finance), and the oil industry.

Prerequisite(s): ARAB 232 or permission of the instructor.

ARAB 385. The Arabian Nights

Credits 3.00 PeopleSoft Course ID 013419 Grading Basis GRD

This course introduces the collection of popular tales known as "The Arabian Nights" or "The Thousand and One Nights." Readings also include medieval and modern European short stories that are adapted from the "Nights", or which appropriate themes and techniques from the "Nights." Instruction is in English. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 386. Arabic Fables and Short Stories

Credits 3.00 PeopleSoft Course ID 013921 Grading Basis GRD

This course provides an overview of short Arabic literary texts, ranging from the animal fables translated by Ibn al-Muqaffa' in the 8th century to Arabic short stories from the 20th century. Students will read a number of stories in English as well as a selection of texts in classical and modern standard Arabic by some of the most prominent Arabic-writing authors of the last thirteen centuries. Advanced topics in grammar will be addressed as the need arises.

Prerequisite(s): ARAB 300 or the permission of the instructor.

ARAB 400. Advanced Arabic Writing and Conversation

Credits 3.00 PeopleSoft Course ID 012190 Grading Basis GRD

Discussions and writings deal with topics of current interest. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 405. The Arabic Novel

Credits 3.00 PeopleSoft Course ID 014075 Grading Basis GRD

This course provides an introduction to novels written in the Arabic language. The goal is to study the development of the modern Arabic novel from the nineteenth century to the present through a selection of ten texts written by authors originating from a number of different Arabic countries. The texts will be placed within the social and political contexts in which they were written. Additionally, social, religious and historical aspects of modern Arab culture will be explored through the texts. The students will gain some familiarity with the major literary trends, themes and genres of this time period. Readings are in English and Arabic. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 410. Media Arabic

Credits 3.00 PeopleSoft Course ID 013103 Grading Basis GRD

An introduction to the vocabulary and language of Arabic press media and to the history of mass media in the Arabic speaking world. The focus is on print and Internet media, although media broadcasting in other forms is also covered. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 411. Colloquial Egyptian Arabic I

Credits 3.00 PeopleSoft Course ID 013716 Grading Basis GRD

This course provides an introduction to Egyptian Colloquial Arabic (ECA), the most widely spoken and understood Arabic dialect. Students will learn the phonological, morphological, syntactic, and semantic particularities of ECA, and the major differences between Modern Standard Arabic and ECA, while developing their listening and speaking skills necessary for personal everyday life. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 412. Colloquial Egyptian Arabic II

Credits 3.00 PeopleSoft Course ID 013717 Grading Basis GRD

This course is a continuation of Colloquial Egyptian Arabic I. It is the second part of an intensive introduction to Egyptian Colloquial Arabic (ECA). Students will build on previously learned material through scenarios of everyday life.

Prerequisite(s): ARAB 300 or permission of the instructor.

ARAB 413. Colloquial Levantine Arabic I (Jordanian/Palestinian)

Credits 3.00 PeopleSoft Course ID 013718 Grading Basis GRD

This course provides an introduction to Jordanian and Palestinian Colloquial Arabic (JCA and PCA), the Arabic dialects spoken in Jordan and Palestine/Israel. Students will learn the phonological, morphological, syntactic and semantic particularities of JCA and PCA, and the major differences between them and Modern Standard Arabic, while developing their listening and speaking skills necessary for personal everyday life. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 414. Colloquial Levantine Arabic II (Syrian/Lebanese)

Credits 3.00 PeopleSoft Course ID 013719 Grading Basis GRD

This course provides an introduction to Syrian and Lebanese Colloquial Arabic (SCA and LCA), the Arabic dialects spoken in Syria and Lebanon. Students will learn the phonological, morphological, syntactic and semantic particularities of SCA and LCA, and the major differences between them and Modern Standard Arabic, while developing their listening and speaking skills necessary for personal everyday life. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 428. Muhammad and the Qur'an

Credits 3.00 PeopleSoft Course ID 013558 Grading Basis GRD

A study of the life of the Prophet Muhammad and the contents of his message as found in the "Sira" (his biography), the Qur'an, and the "hadith" (reports concerning his sayings and actions). Instruction is in English. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 429. Introduction to Qur'anic Arabic

Credits 3.00 PeopleSoft Course ID 013720 Grading Basis GRD

An introduction to the Arabic vocabulary and grammar of the Qur'an and hadith literature. The course provides an intensive overview of Arabic grammar, from basic to advanced topics. Students will gain the ability to read excerpts from the Qur'an and other Islamic religious texts in Arabic. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 446. Special Topics in Arabic Literature

Credits 3.00 PeopleSoft Course ID 012500 Grading Basis GRD

Study of a particular topic in Arabic Literature. May cover all or specific Arabic literature genre. May be repeated if content changes. **Prerequisite(s):** ARAB 300 or permission of the instructor.

ARAB 447. Special Topics in Arabic Civilization and Culture**Credits 3.00 PeopleSoft Course ID 012447 Grading Basis GRD**

Students will study a particular topic in the civilization and /or culture of Arabic countries. Course may be repeated if content changes. **Prerequisite(s):** ARAB 300 or Permission of the Instructor

ARAB 448. Special Topics in Arabic Linguistics**Credits 3.00 PeopleSoft Course ID 012448 Grading Basis GRD**

Students will study a particular topic in Arabic linguistics. Topics could include an introduction to Arabic sociolinguistics and psycholinguistics. Course may be repeated if content changes. **Prerequisite(s):** ARAB 300 or Permission of the Instructor

ARAB 465. Arabic Cinema**Credits 3.00 PeopleSoft Course ID 014326 Grading Basis GRD**

This course provides an introduction to the history of Arabic cinema from its inception at the beginning of the twentieth century to the present. Films are chosen for their artistic qualities and their cultural content. Students will be acquainted with contemporary Arabic culture through the study of a number of films from various Arabic countries. The focus will be on the relation of these films to important elements of the history, societies, cultures and literatures of the Arabic-speaking world. Some films are based on novels or novellas; students will compare these literary works and their visual interpretation in the films. Films will be analyzed in terms of their social, political and intellectual contexts. **Prerequisite(s):** ARAB 300 or permission of instructor.

ARAB 484. Literatures of Islamic Spain and Italy**Credits 3.00 PeopleSoft Course ID 014466 Grading Basis GRD**

This course introduces the literature of Islamic Sicily (Ar. Şağalliyya or Şiqilliyya) and Andalusia (Ar. al-Andalus = Spain and Portugal) from the eighth to the fifteenth century, from the Muslim conquest of the territories to the Swabian rule of southern Italy and the Christian Reconquista of the Iberian Peninsula. This course is intended for students who are interested in Arabic literature and Islamic history and culture, but can also be of interest to students of history, medieval studies, and of Spanish culture and civilization.

Prerequisite(s): ARAB 300 or permission of instructor.**ARAB 490. Special Studies in Arabic****Credits 1.00 - 4.00 PeopleSoft Course ID 013048 Grading Basis GRD**

Special topics or independent studies in Arabic. **Prerequisite(s):** Permission of the instructor.

Architectural Design

ARCD 200. Architect Design Studio I**Credits 6.00 PeopleSoft Course ID 010855 Grading Basis GRD**

This studio focuses on the design process through the creation of objects and architectural spaces. Projects involve investigations into syntax and design language, program interpretation, materiality, ritual, use and the constructed order of built space. Emphasis is placed on experimentation, risk and play. Design projects will incorporate constructed drawings, sketching, diagramming, model-building and writing. **Prerequisite(s):** Architectural Design majors only. ART 102, ART 104, and ART 106; ARTH 205, ARTH 206 or equivalent; or by permission of the instructor.

ARCD 202. Architect Design Studio II**Credits 6.00 PeopleSoft Course ID 010856 Grading Basis GRD**

Design studio building on the fundamentals of ARCD 200. Projects will address both three-dimensional design of spaces and site composition. Projects will include questions of landscape, urbanism, color, material properties and prototypes. Introduction of workshop, digital graphics and photography

incorporated in studio work, with an emphasis on fabrication and constructed full-scale objects. **Prerequisite(s):** ARCD 200.

ARCD 208. Portfolio Review**Credits 0.00 PeopleSoft Course ID 011553 Grading Basis CNC**

This course includes a review of initial student work created during the ARCD 200 level courses, including design, concepts and functionality. Portfolio review required to enroll in architectural design courses at 300 level and above. **Corequisite(s):** ARCD 200 or ARCD 202.

ARCD 220. Digital Processes**Credits 3.00 PeopleSoft Course ID 010858 Grading Basis GRD**

This course will introduce students to principles used in digital processes and representation in architectural production. Technologies to draw three dimensionally on the computer will be considered as a discipline within itself, and students will be instructed to use the machine for design exploration. Various software packages will be utilized during the semester. **Prerequisite(s):** ARCD 200.

ARCD 292. Topics in Architectural Design**Credits 1.00-3.00 PeopleSoft Course ID 014206 Grading Basis GRD***(Repeatable)*

Study of selected topics in architectural design at the introductory level. May be repeated when course content changes. See MyMadison for current topics.

ARCD 300. Architect Design Studio III**Credits 6.00 PeopleSoft Course ID 010859 Grading Basis GRD**

Intermediate design studio building upon skills of ARCD 200-ARCD 202 sequence. Projects will be of greater complexity, scope and technical requirement. Design studies will incorporate drawing, diagramming, models, digital studies and writing. Projects will have a focus on site development in an urban or exurban context. Case studies will be required. **Prerequisite(s):** ARCD 208.

ARCD 302. Architect Design Studio IV**Credits 6.00 PeopleSoft Course ID 010860 Grading Basis GRD**

Intermediate design studio building upon skills of ARCD 300. Projects will be an extension of ARCD 300, but with greater complexity, scope and technical requirements. Design studies will incorporate drawing, diagramming, models, digital studies and writing. Course includes expansion of the design role into collaborative teams, interdisciplinary teams, actual clients, service projects and competitions. **Prerequisite(s):** ARCD 300.

ARCD 303. History of Design**Credits 3.00 PeopleSoft Course ID 010671 Grading Basis GRD**

This course is an investigation into the domains of graphic, architectural and industrial design. The material will explore these disciplines through reading, lecture and an acquired visual literacy of the contextual, ideational and philosophic agendas. **Prerequisite(s):** ARTH 206.

ARCD 330. Materials and Methods**Credits 3.00 PeopleSoft Course ID 009584 Grading Basis GRD**

A lecture course introducing components and materials used in construction and building systems. **Prerequisite(s):** ARCD 208.

ARCD 370. History of Architecture**Credits 3.00 PeopleSoft Course ID 006118 Grading Basis GRD**

Survey of the evolution of architectural design and architectural thought from ancient to modern times. **Prerequisite(s):** ARTH 206.

ARCD 376. Modern Architecture**Credits 3.00 PeopleSoft Course ID 009925 Grading Basis GRD**

Survey of architecture from 1851 to the present day. Thematic investigations will include regional, philosophical and technical developments in architectural

space. Architects may include Labrouste, Berlage, Wagner and Richardson, through Wright, Mies, Le Corbusier, to the avant-garde Murcutt, Siza, Nouvel and Mockbee. **Prerequisite(s):** ARTH 206.

ARCD 390. Independent Studies in Architectural Design

Credits 1.00 - 3.00 PeopleSoft Course ID 011420 Grading Basis GRD

Independent activity at the intermediate level, such as research or studio practice, under faculty supervision. Projected studies in any area of the school's offering must be arranged with the instructors who will direct them. Offered only with the consent of the instructor.

ARCD 392. Topics in Architectural Design

Credits 3.00 PeopleSoft Course ID 011509 Grading Basis GRD (Repeatable)

Study of selected topics in architectural design at the intermediate level. May be repeated when course content changes. See MyMadison for current topics.

Prerequisite(s): ARCD 208.

ARCD 400. Architect Design Studio V

Credits 6.00 PeopleSoft Course ID 010867 Grading Basis GRD

An upper-level design studio building upon the design rigor and technical craft acquired in the ARCD 300-ARCD 302 sequence. The studio will be organized into a series of short topical projects. Projects will include contemporary research initiatives including the body, landscape, urbanism, materiality and/or social justice. **Prerequisite(s):** ARCD 302.

ARCD 402. Architect Design Studio VI

Credits 6.00 PeopleSoft Course ID 010868 Grading Basis GRD

Final upper-level architectural design studio culminating in a thesis project. Individual student directives for the development and execution of a design research project. **Prerequisite(s):** ARCD 400.

ARCD 440. Professional Design Practices

Credits 3.00 PeopleSoft Course ID 001154 Grading Basis GRD

This course examines procedures and practices in the architectural design profession. **Prerequisite(s):** ARCD 300 or permission of the instructor.

ARCD 470. Contemporary Design

Credits 3.00 PeopleSoft Course ID 012375 Grading Basis GRD

Seminar format class which explores influential ideas in contemporary design, including critical regionalism, postmodernism, minimalism, the neo-avantgarde, green design, Marxism and post-structuralism. **Prerequisite(s):** ARCD 208 and ARTH 206.

ARCD 490. Independent Studies in Architectural Design

Credits 1.00 - 3.00 PeopleSoft Course ID 001427 Grading Basis GRD (Repeatable)

Independent activity, such as research or studio practice, under faculty supervision. Projected studies in any area of the school's offering must be arranged with the instructors who will direct them. Offered only with consent of the instructor.

ARCD 491. Studio Assistant

Cross listed with: ARED 491, ART 491, GRPH 491, INDU 491

Credits 1.00 - 3.00 PeopleSoft Course ID 012198 Grading Basis GRD (Repeatable)

An on-campus program monitored on an individual basis designed to provide practical studio experience in the visual arts. Students will learn safe studio practices and management skills, including material use, inventory control and the proper operation of equipment found within various individual classroom studios. **Prerequisite(s):** Permission of the instructor.

ARCD 492. Topics in Architectural Design

Credits 3.00 PeopleSoft Course ID 011422 Grading Basis GRD (Repeatable)

Study of selected topics in architectural design at the advanced level. May be repeated when course content changes. See MyMadison for current topics.

Prerequisite(s): ARCD 208.

ARCD 496. Internship

Credits 0.00 PeopleSoft Course ID 002896 Grading Basis GRD

An off-campus program prepared and monitored on an individual basis. Internships are designed to provide practical experience in professional design settings. **Prerequisite(s):** Permission of the instructor.

ARCD 499. Honors

Credits 1.00 - 6.00 PeopleSoft Course ID 014644 Grading Basis GRD

Honors 499 is taken as a three-course sequence. In the first course, the student works with their faculty adviser to generate an idea for an independent Honors research project, including a reading list and annotated bibliography. In the second course, the student completes the research for their project. In the third course, the student prepares an oral and written presentation of their research project results. Repeatable for a maximum of six credits for Honors students. **Prerequisite(s):** ARCD 208 and instructor permission.

Art

ART 102. Two-Dimensional Design (0,6)

Credits 3.00 PeopleSoft Course ID 005305 Grading Basis GRD

Application and appreciation of the principles and elements of design, with emphasis on line, form, color and texture as applied to two-dimensional space.

ART 104. Drawing I (0,6)

Credits 3.00 PeopleSoft Course ID 005637 Grading Basis GRD

An introductory course composed of problems in landscape, perspective, figure and still-life in several media.

ART 106. Three-Dimensional Design (0,6)

Credits 3.00 PeopleSoft Course ID 003097 Grading Basis GRD

A course exploring the basic problems in three-dimensional design.

ART 108. Drawing II (0,6)

Credits 3.00 PeopleSoft Course ID 003669 Grading Basis GRD

A continuation of ART 104 involving more complex problems with emphasis on composition and expressive possibilities of a variety of media including ink, pencil, conte, charcoal and experimental materials. **Prerequisite(s):** ART 104.

ART 200. Art in General Culture [C2VPA]

Credits 3.00 PeopleSoft Course ID 005582 Grading Basis GRD

An exploratory course that aims to develop a non-technical, general cultural understanding of the space arts, such as architecture, painting, sculpture and industrial design. Emphasis is on the contemporary. May be used for general education credit.

ART 205. Professional Practices in Art

Credits 3.00 PeopleSoft Course ID 011032 Grading Basis GRD

A course for studio art majors focused on the exploration and exchange of ideas related to embarking on a studio career. Contemporary issues and responsibilities faced by emerging artists are emphasized. Students will investigate various visual art disciplines offered by JMU, write an artist's statement, and construct a website and digital portfolio. **Corequisite(s):** ART 102 and ART 104.

ART 220. Introductory Ceramics: Potter's Wheel (0,9)

Credits 3.00 PeopleSoft Course ID 011948 Grading Basis GRD

Explores the aesthetics, conceptualization and design of functional objects. Investigates tactility and the process of realizing form and the effective use of the wheel as a creative tool. Introduces historic and contemporary approaches, firing techniques and glaze application. **Prerequisite(s):** ART 102, ART 104 and ART 106.

ART 222. Introductory Ceramics: Handbuilding (0,9)**Credits 3.00 PeopleSoft Course ID 011950 Grading Basis GRD**

Forming techniques will be explored for both vessel and sculptural work.

Addresses construction concerns such as timing, structure and mass.

Conceptual issues of hand-formation and ceramic sculpture discussed.

Introduces historic and contemporary approaches, firing techniques and glaze application. **Prerequisite(s):** ART 102, ART 104 and ART 106

ART 230. Introduction to Fiber Processes (0,9)**Credits 3.00 PeopleSoft Course ID 010030 Grading Basis GRD**

Introduction to and practice in basic weaving and other fiber arts. Emphasis will be placed on floor loom weaving and surface design on the fabric.

Prerequisite(s): ART 102 and ART 104

ART 232. Introduction to Fiber Arts: Structures**Credits 3.00 PeopleSoft Course ID 013770 Grading Basis GRD**

In this introductory level studio course, students develop skills and cultivate conceptual concerns related to the fibers medium related to structural forms.

Traditional and experimental materials will be used to explore such techniques as knitting, crochet, looping, felting, offloom weaving and embroidery. Topics will include the historical relevance of fibers; its relationship to ideas such as labor and identity; and what textiles have to offer within the expanded field of contemporary art. **Prerequisite(s):** ART 102 and ART 104

ART 234. Introduction to Fiber Arts: Surfaces**Credits 3.00 PeopleSoft Course ID 013771 Grading Basis GRD**

In this introductory level studio course, students develop skills and cultivate conceptual concerns related to the fibers medium related to surface design. Traditional and experimental materials will be used to explore such techniques as quilting, dyeing, piecing, shibori, dye printing and embroidery. Topics will include the historical relevance of fibers; its relationship to ideas such as labor and identity; and what textiles have to offer within the expanded field of contemporary art. **Prerequisite(s):** ART 102 and ART 104

ART 240. Metal and Jewelry (0,9)**Credits 3.00 PeopleSoft Course ID 009659 Grading Basis GRD**

An introduction to designing and executing jewelry and related objects through various fabrication and finishing techniques, and the exploration of metal as a medium of personal aesthetic expression. **Prerequisite(s):** ART 102 and ART 104.

ART 242. Bladesmithing: Exploring Form and Function**Credits 3.00 PeopleSoft Course ID 014109 Grading Basis GRD**

Students will explore the complex interplay of form and function through the techniques, materials and concepts of knifemaking.

ART 252. Introductory Painting (0,9)**Credits 3.00 PeopleSoft Course ID 012408 Grading Basis GRD**

Introduction to basic materials and techniques in oil or acrylic painting. This class extends previous practice with design and drawing through introductory experiences in painting. **Prerequisite(s):** ART 102 and ART 104.

ART 260. Introductory Photography: Black and White (0,9)**Credits 3.00 PeopleSoft Course ID 001794 Grading Basis GRD**

A creative approach to photography with emphasis on understanding materials and techniques. (Students must provide a fully manual 35mm camera and a light meter which may be built into the camera or separate.) **Prerequisite(s):** ART 102 and ART 104.

ART 270. Printmaking: Screenprint (0,9)**Credits 3.00 PeopleSoft Course ID 004950 Grading Basis GRD**

An introduction to the history and techniques of screenprinting. Lectures, demonstrations and projects will involve photographic and

nonphotographic stencils, related digital processes and color registration.

Prerequisite(s): ART 102 and ART 104.

ART 272. Printmaking: Relief and Intaglio**Credits 3.00 PeopleSoft Course ID 007822 Grading Basis GRD**

An introduction to the history and techniques of relief and intaglio printing.

Lectures, demonstrations and projects will involve oil based and water-soluble inks, linocut, woodcut, wood engraving, collagraph, drypoint, engraving, line etching, aquatint, softground, color registration and related photographic processes. Formerly ART 354. **Prerequisite(s):** ART 102 and ART 104.

ART 274. Printmaking: Lithography (0,9)**Credits 3.00 PeopleSoft Course ID 007211 Grading Basis GRD**

An introduction to the history and techniques of lithography printing. Lectures, demonstrations and projects will involve stone and plate lithography, color registration and related photographic processes. **Prerequisite(s):** ART 102 and ART 104.

ART 276. Introductory Book Arts: Materials and Structures**Credits 3.00 PeopleSoft Course ID 013508 Grading Basis GRD**

This course offers students an opportunity to engage in the techniques, structures, tools, and materials used in creating artists' books. A broad range of studio practice will be explored as they examine the relationship of verbal, visual and structural content in books. Students will complete group and individual projects. **Prerequisite(s):** ART 102 and ART 104

ART 280. Sculpture (0,9)**Credits 3.00 PeopleSoft Course ID 005103 Grading Basis GRD**

Problems in three-dimensional form using traditional and modern techniques. Processes of modeling in clay, mold making, casting, carving in wood and stone and welded metal sculpture are explored. **Prerequisite(s):** ART 106.

ART 292. Topics in Art**Credits 1.00-3.00 PeopleSoft Course ID 014209 Grading Basis GRD**
(Repeatable)

Study of selected topics in art at the introductory level. May be repeated when course content changes. See MyMadison for current topics.

ART 300. Illustration (0, 9)

Cross listed with: GRPH 300

Credits 3.00 PeopleSoft Course ID 004886 Grading Basis GRD

Through demonstrations, theory and practical application, students are introduced to numerous media and illustrative techniques. Encouraged experimentation is tempered by an understanding of problem solving and conceptualization. **Prerequisite(s):** ART 108.

ART 304. Methods of Art Criticism**Credits 3.00 PeopleSoft Course ID 001048 Grading Basis GRD**

The practical analysis and interpretation of works of art through oral and written forms. Emphasis is on the practice of art criticism in public settings such as the school classroom, art museum and college art studio.

ART 305. Seminar in Aesthetics

Cross listed with: PHIL 305

Credits 3.00 PeopleSoft Course ID 008506 Grading Basis GRD

Readings and discussions in the persistent philosophical problems of the arts centering on consideration of the work of art, the artist and the audience. **Prerequisite(s):** ART 200 , ARTH 205 , ARTH 206 or PHIL 101.

ART 310. Graphic Illustration

Cross listed with: GRPH 310

Credits 3.00 PeopleSoft Course ID 014626 Grading Basis GRD

Students will use traditional fine arts and digital media to explore the conceptualization, production and communication of visual information integral

to selling products, clarifying and organizing data, explaining abstract concepts, and educating through the creation of imagery for advertising, infographics, and technical and scientific illustrations. Emphasis is placed on development of technical skillsets, personal aesthetic and style. **Prerequisite(s):** ART 102, ART 104 and ART 108.

ART 320. Intermediate Ceramics: Molds and Casting (0,9)

Credits 3.00 PeopleSoft Course ID 000854 Grading Basis GRD

Mold-making systems and processes for ceramic slip casting and press molding. Conceptual issues of multiples, reproductions and material transformation discussed. Also suitable for students wanting to utilize molds with other materials in their artistic production. **Prerequisite(s):** ART 220 or ART 222.

ART 322. Intermediate Ceramics: Surface Development (0,9)

Credits 3.00 PeopleSoft Course ID 000057 Grading Basis GRD

Research and experimentation with ceramic materials and finishes, glaze formulation, and application for finishing ceramic artwork. Forming processes may include any combination of the potter's wheel, handbuilding and mold making. **Prerequisite(s):** ART 220 or ART 222 or by permission.

ART 330. Intermediate Fiber Processes (0, 9)

Credits 3.00 PeopleSoft Course ID 004421 Grading Basis GRD (Repeatable)

Introduction to surface design techniques such as painting and printing on fabric. Further work may be in this area or in weaving or other fiber techniques. Course is repeatable. **Prerequisite(s):** ART 230, ART 232 or ART 234 or permission of the instructor.

ART 336. Pulp

Credits 3.00 PeopleSoft Course ID 014076 Grading Basis GRD

Students will use raw, natural and recycled materials to explore the basic techniques, processes and concepts used in papermaking. Pulp materials and fabrication processes will be explored through techniques using traditional mold and deckle, sculptural mold making, and pulp inclusions. Students will gain skills in beating a variety of fibers, sheet forming, sculpting with pulp and pulp painting. **Prerequisite(s):** ART 276

ART 340. Intermediate Metal and Jewelry (0,9)

Credits 3.00 PeopleSoft Course ID 001127 Grading Basis GRD (Repeatable)

An intermediate course offering further exploration of metal as a medium of personal aesthetic expression as well as more advanced technical experience and experimentation. Course is repeatable. **Prerequisite(s):** ART 240.

ART 350. Figure Drawing (0,9)

Credits 3.00 PeopleSoft Course ID 000797 Grading Basis GRD

An introductory course with problems stressing the fundamental skills, approaches and concepts involved in drawing the human figure.

Prerequisite(s): ART 104 and ART 108.

ART 352. Intermediate Painting

Credits 3.00 PeopleSoft Course ID 012741 Grading Basis GRD

Intermediate experiences in materials and techniques in oil, acrylic and nontraditional painting media. This class extends previous experiences introduced in ART 252, with a focus on developing a more personal iconography and content. A variety of materials, techniques, surfaces and philosophies of working are discussed in lecture, demonstration, and in both individual and group critique. **Prerequisite(s):** ART 252.

ART 354. Watercolor (0,9)

Credits 3.00 PeopleSoft Course ID 009185 Grading Basis GRD

Study of and practice in transparent and opaque watercolor techniques. **Prerequisite(s):** ART 102 and ART 104.

ART 360. Intermediate Photography: Digital (0,9)

Credits 3.00 PeopleSoft Course ID 007791 Grading Basis GRD

An intensive exploration of digital photography with an introduction to digital camera techniques, combinations of traditional and digital photographic methods, image manipulation and modes of output. **Prerequisite(s):** ART 260.

ART 362. Intermediate Photography: Experimental Black and White (0,9)

Credits 3.00 PeopleSoft Course ID 002119 Grading Basis GRD

Intensive exploration of advanced black and white photography using alternative cameras, pinhole, a variety of film speeds and papers and sequential concepts. **Prerequisite(s):** ART 260.

ART 364. Intermediate Photography: Large Format (0,9)

Credits 3.00 PeopleSoft Course ID 011951 Grading Basis GRD

An exploration of medium format and view camera techniques, film exposure and advanced black and white printing. **Prerequisite(s):** ART 260.

ART 375. Letterpress

Cross listed with: GRPH 375

Credits 3.00 PeopleSoft Course ID 013509 Grading Basis GRD

This studio course offers students an opportunity to engage in the process and product of letterpress printing through various techniques and conceptual approaches. Instruction focuses on text and image relationships by integrating metal and wood type, and other type-high surfaces. Emphasis will be placed on the acquisition of skills and vocabulary and the creative use of type and image. The course will address the history of letterpress and its contribution to contemporary art and design. **Prerequisite(s):** ART 102 and ART 104 ; For GRPH credit: GRPH 208.

ART 376. Intermediate Book Arts: Concept, Content, Form

Cross listed with: GRPH 376

Credits 3.00 PeopleSoft Course ID 013510 Grading Basis GRD

This course challenges the student to develop a limited edition hand-made artists' book. The appropriate format for each individual's concepts are identified, adapted, customized, applied, and produced. Content development, book design, integration of various media and the functionality of various bookmaking materials are explored. We will consider the artists' book as a sculptural form and locate it within the broader context of contemporary writing and visual art. **Prerequisite(s):** ART 276. For GRPH: ART 276 and GRPH 208.

ART 380. Sculpture: Conceptual Practice (0,9)

Credits 3.00 PeopleSoft Course ID 001522 Grading Basis GRD

This class is an exploration of both theoretical and practical concerns in relation to sculpture. Students will develop methods of thinking and making that are derived from their own ideas and interests. Projects will be generated from sources relevant to contemporary art and culture. **Prerequisite(s):** ART 280.

ART 390. Independent Study in Art

Credits 1.00 - 3.00 PeopleSoft Course ID 000611 Grading Basis GRD

Independent activity at the intermediate level, such as research or studio practice, under faculty supervision. Projected studies in any area of the school's offering must be arranged with the instructors who will direct them. Offered only with the consent of the instructor.

ART 392. Topics in Art

Credits 3.00 PeopleSoft Course ID 011423 Grading Basis GRD (Repeatable)

Study of selected topics in art at the intermediate level. May be repeated when course content changes. See MyMadison for current topics.

ART 400. Topics in Illustration

Cross listed with: GRPH 400

Credits 3.00 PeopleSoft Course ID 014627 Grading Basis GRD

This course allows for the development of an advanced level class that teaches content not introduced in required illustration courses or expanding on the existing illustration courses. Instructional goals and defined outcomes will be unique to the class topic. **Prerequisite(s):** For ART: ART 300 or ART 310; For GRPH: GRPH 208 and either GRPH 300 or GRPH 310; or permission of instructor.

ART 420. Advanced Ceramics: Portfolio Development (0,9)

Credits 1.00 - 3.00 PeopleSoft Course ID 000771 Grading Basis GRD (Repeatable)

Self-directed, focused course of study with supervision of the instructor. This course is the culmination of ceramic study, resulting in a body of work suitable for exhibition and that is representative of the student's research and development. **Prerequisite(s):** ART 320 and ART 322 or permission of the instructor.

ART 430. Advanced Fiber Processes

Credits 1.00 - 3.00 PeopleSoft Course ID 002824 Grading Basis GRD (Repeatable)

A series of fiber projects selected by the student with the approval of the instructor. **Prerequisite(s):** ART 330.

ART 432. Digital Processes in Fibers

Credits 3.00 PeopleSoft Course ID 013818

In this upperdivision course, students develop skills and conceptual concerns pertaining to screenprinting. Additionally, this class surveys a range of digital technologies specifically applicable to fibers. Students will leave this course with the knowledge of several software interfaces, practical experience planning for image generation and a portfolio of advanced fibers work. **Prerequisite(s):** ART 230, ART 232 or ART 234.

ART 434. Collaboration in Fiber Arts

Credits 3.00 PeopleSoft Course ID 013819

The course will examine social practice in fiber arts including art and activism, network art, Social Aesthetics, poststudio practices and Relational Aesthetics. This course will place a strong emphasis on contemporary examples of art and social practice. Through group activities, discussions, student led seminars and participatory projects, the class will work together to address contemporary issues in collaboration. **Prerequisite(s):** ART 230, ART 232 or ART 234.

ART 436. Woven Structures in Fiber Arts

Credits 3.00 PeopleSoft Course ID 013972 Grading Basis GRD

Traditional and experimental use of materials, techniques and structures are used to understand weaving as a cross-disciplinary practice including exploration of floor-loom hand weaving. Students will explore various forms of encoding information and address personal strategies for developing individual art practices. Weaving's role within the larger contemporary art world will be discussed and understandings of what constitutes a woven structure will be challenged. **Prerequisite(s):** ART 230, ART 232 or ART 234.

ART 438. Iterative Structures in Fiber Arts

Credits 3.00 PeopleSoft Course ID 013973 Grading Basis GRD

This course engages students in spatiality, object creation and physical construction and will supplement artistic practice and design methodologies for sculptural fiber art or experimental design. Strategies for engaging in off loom fiber art structures such as knitting, macrame, crochet and basketry techniques will be explored. Class activities will include demonstrations, lectures, critiques and discussions revolving around iterative design strategies in fiber art.

Prerequisite(s): ART 230, ART 232 or ART 234.

ART 439. Portfolio Development Fibers

Credits 1.00 - 3.00 PeopleSoft Course ID 014438 Grading Basis GRD

This intensive exploration in fiber arts focuses on a theme or process that results in a cohesive body of work from a self-directed project and a written artist's statement. **Prerequisite(s):** ART 330.

ART 440. Advanced Metal and Jewelry (0,9)

Credits 1.00 - 3.00 PeopleSoft Course ID 005167 Grading Basis GRD (Repeatable)

A series of metal arts projects selected by the student with the approval of the instructor. Course is repeatable. **Prerequisite(s):** ART 340

ART 450. Advanced Figure Drawing

Credits 1.00-3.00 PeopleSoft Course ID 011435 Grading Basis GRD (Repeatable)

An advanced drawing course stressing inventive and in-depth approaches to portraying the human figure. **Prerequisite(s):** ART 350

ART 452. Advanced Painting (0,9)

Credits 1.00-3.00 PeopleSoft Course ID 003879 Grading Basis GRD (Repeatable)

Advanced problems in media selected by the student with the advice of the instructor. **Prerequisite(s):** ART 352.

ART 454. Advanced Watercolor (0,9)

Credits 1.00-3.00 PeopleSoft Course ID 003920 Grading Basis GRD (Repeatable)

Advanced problems in the use of watercolor and related water-based media.

Prerequisite(s): ART 354.

ART 460. Advanced Photography: Alternative Processes (0,9)

Cross listed with: ART 560

Credits 1.00 - 3.00 PeopleSoft Course ID 000499 Grading Basis OPT

Advanced study in photography focusing on alternative processes and experimental approaches including non-silver 19th century techniques, Polaroid and liquid emulsion among others. **Prerequisite(s):** ART 360, ART 362 or ART 364.

ART 462. Advanced Photography: The Prehistory of Photography, Magic and Illusion

Cross listed with: ART 562

Credits 1.00 - 3.00 PeopleSoft Course ID 011960 Grading Basis GRD

An exploration of the culture and trends leading to the invention of photography, facilitating the formation of concepts and objects which create wonder. **Prerequisite(s):** ART 360, ART 362 or ART 364.

ART 464. Advanced Photography: The Photograph as Document

Cross listed with: ART 564

Credits 3.00 PeopleSoft Course ID 013462 Grading Basis GRD

An exploration of technical, conceptual and theoretical approaches to making documentary-based photographic work using film, digital or video cameras.

Prerequisite(s): ART 360, ART 362 or ART 364.

ART 466. Advanced Photography: Performance for the Lens

Credits 3.00 PeopleSoft Course ID 013511 Grading Basis GRD

An exploration of technical, conceptual and theoretical approaches to making, staging and directing performance-based photographic work using film, digital or video cameras. **Prerequisite(s):** ART 360, ART 362 OR ART 364.

ART 468. Advanced Photography: Screen-Based Photo/Video

Credits 3.00 PeopleSoft Course ID 013416 Grading Basis GRD

An exploration of technical, conceptual and theoretical approaches to making screen-based photographic projects culminating in a fully developed online presentation. **Prerequisite(s):** ART 362.

ART 469. Photography: Portfolio Development (0,9)

Credits 1.00-3.00 PeopleSoft Course ID 011952 Grading Basis GRD
(Repeatable)

An intensive exploration in photography focusing on a theme or process that results in a cohesive body of work from a self-directed project and a written artist's statement. **Prerequisite(s):** ART 360, ART 362 or ART 364.

ART 470. Advanced Printmaking (0,9)

Credits 1.00 - 3.00 PeopleSoft Course ID 005268 Grading Basis GRD
(Repeatable)

Advanced projects in printmaking to be determined by the student and instructor. **Prerequisite(s):** ART 270, ART 272 or ART 274.

ART 480. Sculpture: Expanded Field

Credits 1.00-3.00 PeopleSoft Course ID 008540 Grading Basis GRD
(Repeatable)

This class is an opportunity for students to pursue an individualized body of work. It approaches sculpture as a diverse and expanding field that embraces spatial-object and material-based practices; performance and lens-based media; forms of digital technology and the internet; social and relational practice; and landscape and environmental engagement. **Prerequisite(s):** ART 380.

ART 489. Portfolio Development Sculpture

Credits 1.00 - 3.00 PeopleSoft Course ID 014439 Grading Basis GRD

This intensive exploration in sculpture focuses on a theme or process that results in a cohesive body of work from a self-directed project and a written artist's statement.

Prerequisite(s): ART 380.

ART 490. Independent Study in Art

Credits 1.00 - 3.00 PeopleSoft Course ID 001584 Grading Basis GRD
Repeatable

Independent activity, such as research or studio practice, under faculty supervision. Projected studies in any area of the school's offering must be arranged with the instructors who will direct them. Offered only with consent of the instructor.

ART 491. Studio Assistant

Cross listed with: ARCD 491, ARED 491, GRPH 491, INDU 491

Credits 1.00-3.00 PeopleSoft Course ID 012198 Grading Basis GRD
(Repeatable)

An on-campus program monitored on an individual basis designed to provide practical studio experience in the visual arts. Students will learn safe studio practices and management skills, including material use, inventory control and the proper operation of equipment found within various individual classroom studios. **Prerequisite(s):** Permission of the instructor.

ART 492. Topics in Art

Credits 3.00 PeopleSoft Course ID 011143 Grading Basis GRD (Repeatable)

Study of selected topics in art, art history, graphic design or interior design at the advanced level. May be repeated when course content changes. See MyMadison for current topics.

ART 493. Contemporary Art Theory

Credits 3.00 PeopleSoft Course ID 012968 Grading Basis GRD

This is a reading, research and discussion seminar designed for upper level undergraduate and first-year graduate level studio art majors addressing historic and contemporary issues surrounding vision, the senses and aesthetics in the theory and practice of art.

ART 495. Capstone Seminar: Three-Dimensional Art

Credits 3.00 PeopleSoft Course ID 013512 Grading Basis GRD

A team-taught, intensive seminar for B.F.A. in studio art seniors with concentrations in metals/jewelry, ceramics, fibers or sculpture, or with an emphasis in integrated 3D. Capstone seminar is designed to be a transition into professional life, to help students organize and prepare themselves for graduation and to provide opportunities to work with faculty on professional concerns beyond the studio. **Corequisite(s):** ART 497.

ART 496. Internship in Art

Credits 1.00 - 8.00 PeopleSoft Course ID 000173 Grading Basis GRD

A program prepared and monitored on an individual basis. Internships are designed to provide practical experience in the arts. **Prerequisite(s):** Permission of the instructor and ARTH 394 if in museums and galleries.

ART 497. Capstone Studio: Three-Dimensional Art

Credits 3.00 PeopleSoft Course ID 013513

An intensive studio for B.F.A. in studio art seniors with concentrations in metals/jewelry, ceramics, fibers or sculpture, or with an emphasis in integrated 3D. Working closely with their concentration adviser, students refine their artistic voice, build their portfolio and develop their senior thesis presentation. The course culminates in a professional-quality body of work ready for exhibition. **Corequisite(s):** ART 495.

ART 499. Honors

Credits 6.00 PeopleSoft Course ID 001449 Grading Basis GRD (6.00 credits total for three semesters (1, 3, 2))

Art Education

ARED 300. Elementary Art Education Methods (1, 4)

Credits 3.00 PeopleSoft Course ID 006582 Grading Basis GRD

A study of the aims, philosophy, management, and current methods of art education in elementary school with an emphasis on child growth and development in visual expression. Experiences include developing thematic lessons with art techniques and materials suitable from Kindergarten through grade five with emphasis on instructional art content, lesson plan preparation, teaching strategies, assessment of student learning, and professional dispositions. **Prerequisite(s):** PSYC 160, EDUC 200 and permission of instructor.

ARED 302. Secondary Art Education Methods

Credits 3.00 PeopleSoft Course ID 009900 Grading Basis GRD

The study of art education methods, philosophy and contemporary practices as they relate to public education secondary school and lifelong learning with adults. Experience with concepts and ideas relevant to secondary curriculum with a focus on instructional art content, lesson plan preparation, teaching strategies, assessment of student learning and professional dispositions.

Prerequisite(s): PSYC 160, EDUC 200 and permission of instructor.

ARED 392. Topics in Art Education

Credits 3.00 PeopleSoft Course ID 012165 Grading Basis GRD

Study of selected topics in art education at the intermediate level. See MyMadison for current topics.

ARED 400. Visual Arts Across the Curriculum (1,4)

Credits 3.00 PeopleSoft Course ID 006737 Grading Basis GRD

Explores ways in which the art teacher can promote relationships among art and other subjects within the public school curriculum. Emphasis will be placed on how art experiences can be used to teach skills and concepts associated with other subjects. Includes a range of intensive non-art classroom field experiences at the middle grade level. **Prerequisite(s):** ARED 300, ARED 302, EDUC 200, PSYC 160 and permission of instructor.

ARED 480. Student Teaching

Credits 8.00 PeopleSoft Course ID 013507 Grading Basis CNC

Enables students to apply, in the public school classrooms and the comprehensive child development programs, those skills and attitudes acquired in all components of teacher education. Under the guidance of university supervisors, students are provided activities designed to familiarize them with the classroom teacher's role. Two sections of student teaching are completed for a total of sixteen credits. Sections must include the elementary level and secondary level. **Prerequisite(s):** *ARED 300, ARED 302 and ARED 400, the appropriate education courses, and permission of the coordinator of field experiences.*

ARED 490. Field Experiences in Art Education

Credits 1.00-3.00 **PeopleSoft Course ID** 012180 **Grading Basis** GRD

Field experiences tied to the appropriate methods course at the elementary, middle, or high school levels under faculty supervision and an assigned cooperating teacher in the public schools. Practicum field experiences are arranged, approved, and directed by the methods course instructor in conjunction with the coordinator of field experiences. Offered only with the consent of the instructor. **Corequisite(s):** *Concurrent with the appropriate methods course: ARED 300, ARED 302 or ARED 400.*

ARED 491. Studio Assistant

Cross listed with: *ARCD 491, ART 491, GRPH 491, INDU 491*

Credits 1.00 - 3.00 **PeopleSoft Course ID** 012198 **Grading Basis** GRD

An on-campus program monitored on an individual basis designed to provide practical studio experience in the visual arts. Students will learn safe studio practices and management skills, including material use, inventory control and the proper operation of equipment found within various individual classroom studios. **Prerequisite(s):** *Permission of the instructor.*

ARED 496. Internship in Art Education

Credits 1.00 - 8.00 **PeopleSoft Course ID** 012178 **Grading Basis** GRD

A program prepared and monitored on an individual basis. Internships are designed to provide practical experience in the arts.

Prerequisite(s): *Permission of the instructor and ARTH 394 if in museums and galleries.*

Art History

ARTH 205. Survey of World Art I: Prehistoric to Renaissance [C2VPA]

Credits 3.00 **PeopleSoft Course ID** 000022 **Grading Basis** GRD

An introduction to the art and architecture of the world from cave painting through European pre-Renaissance art. Includes ancient through medieval art in Europe and the Near East, as well as Asian and African arts. May be used for general education credit.

ARTH 206. Survey of World Art II: Renaissance to Modern [C2VPA]

Credits 3.00 **PeopleSoft Course ID** 007212 **Grading Basis** GRD

Introduction to art and architecture of the world from the Renaissance through Modern ages. Includes European Renaissance, Baroque, Enlightenment, 19th and 20th centuries, as well as Asian and African arts. May be used for general education credit.

ARTH 210. African Art & Culture in the Humanities

Credits 3.00 **PeopleSoft Course ID** 010624 **Grading Basis** GRD

An interdisciplinary introduction to African art and culture with topics focusing on life ways, music, religion, philosophy, art, literature and cinema. This course provides a strong background for upper-division course work in the arts of African and the African Diaspora, as well as for students pursuing degrees in history and anthropology.

ARTH 289. Topics in Art History

Credits 3.00 **PeopleSoft Course ID** 013974 **Grading Basis** GRD (*Repeatable*)

Study of selected topics in art history, including museum studies, at the introductory level. May be repeated when course content changes. See MyMadison for current topics.

ARTH 300. Art History Seminar

Credits 3.00 **PeopleSoft Course ID** 007406 **Grading Basis** GRD

Exploration of various methodological approaches in the history of art, including connoisseurship, iconography, formalism, psychological studies and interpretations of art and society. Students will examine contrasting interpretations of major works of art. Seminar format. **Prerequisite(s):** *ARTH 205, ARTH 206 or permission of the instructor.*

ARTH 301. Institutions and Professions in Art History

Credits 3.00 **PeopleSoft Course ID** 013884 **Grading Basis** GRD

This elective art history course prepares students for professions related to the field through exploration of the histories and missions of its important institutions. Organizations at the international, national and local levels that support the arts are considered. While conducting advanced research and writing on a chosen institution, or on an important issue in the field, students are exposed to a wide range of future opportunities in their professional lives.

ARTH 304. History of Photography

Credits 3.00 **PeopleSoft Course ID** 006810 **Grading Basis** GRD

A survey of photography as an art form from its discovery to the present day. Emphasis is on 20th-century developments and recent contemporary trends.

ARTH 305. History of Decorative Arts

Credits 3.00 **PeopleSoft Course ID** 010610 **Grading Basis** GRD

A history of the decorative arts in Europe and America from c. 1200 to c. 1930. This course provides a stylistic and contextual analysis, concentrating on domestic furnishings, including textiles, furniture, metals, ceramics and glass. **Prerequisite(s):** *ARTH 205 or ARTH 206.*

ARTH 309. Topics in Museum Studies

Credits 3.00 **PeopleSoft Course ID** 013975 **Grading Basis** GRD

This course may include studies of select museums, or categories of museums, their histories and current missions and projects; the history of collecting, as well as the dispersal of collections; the repatriation of artworks; and consideration of significant issues in the field at the intermediate level. Topics vary. See MyMadison for current topics.

ARTH 312. African Art: Sub-Saharan

Credits 3.00 **PeopleSoft Course ID** 010978 **Grading Basis** GRD

A survey of the arts and cultures of sub-Saharan Africa, focusing on the major style areas of the continent. Coverage will include: the historic sites of Nigeria, the Guinea Coast, and central, eastern and southern Africa. **Prerequisite(s):** *ARTH 205 or ARTH 206.*

ARTH 313. Masterpieces of Italian Renaissance Art

Credits 3.00 **PeopleSoft Course ID** 007827 **Grading Basis** GRD *Semester in Florence only*

A survey of Italian Renaissance painting and sculpture (1280-1550), including the works of Giotto, Donatello, Masaccio, Fra Angelico, Botticelli, Leonardo and Michelangelo. Weekly visits to the Uffizi, San Marco, the Accademia and other Florentine museums.

ARTH 314. Masterpieces of Spanish Art [C2VPA]

Credits 3.00 **PeopleSoft Course ID** 006780 **Grading Basis** GRD

A survey of art in Spain from prehistoric cave painting through 20th-century art. Emphasis is given to 17th-18th century Baroque and modern artists including El Greco, Velasquez, Goya, Gaudi and Picasso. Visits to Altamira, the Alhambra, the Prado, Toledo, Santillana del Mar and other sites.

Prerequisite(s): *Studies Abroad - Salamanca.*

ARTH 316. Masterpieces of British Art

Credits 3.00 PeopleSoft Course ID 002235 Grading Basis GRD Semester in London

Survey of painting and sculpture in Britain (1530-1860) concentrating on 18th/19th-century painting. British art is viewed in the context of European civilization. Weekly visits to London museums including the Portrait Gallery, Sir John Soane's House, the Wallace Collection and the Tate Gallery.

ARTH 320. Travel Study in Art History

Credits 3.00 PeopleSoft Course ID 003596 Grading Basis GRD

Art history credit is available to students participating in formal travel study programs with an emphasis on art history. Students maintain a journal with an emphasis on their art history experiences and write a research paper.

Prerequisite(s): *Permission of the program leader and art history coordinator.*

ARTH 325. Topics in Non-Western Art and Architecture

Credits 3.00-9.00 PeopleSoft Course ID 013976 Grading Basis GRD

This course will consider the study of a culture outside of the European and Anglo American traditions at the intermediate level. Topics vary. See MyMadison for current topics.

ARTH 326. Topics in Cross-Cultural Art

Credits 3.00-9.00 PeopleSoft Course ID 013977 Grading Basis GRD

This course will consider the study of two or more artistic traditions that intersect at the intermediate level. Topic varies. See MyMadison for current topics.

ARTH 327. Topics in Pre-Modern Art

Credits 3.00 PeopleSoft Course ID 013978 Grading Basis GRD

This course will consider the study of a culture or tradition before the Modern Age at the Intermediate level. Topics vary. See MyMadison for current topics.

ARTH 328. Topics in Modern and Contemporary Art

Credits 3.00 PeopleSoft Course ID 013979 Grading Basis GRD

This course will consider the study of a culture or tradition in the most recent centuries or decades at the Intermediate level. Topics vary. See MyMadison for current topics.

ARTH 332. Islamic Art and Architecture

Credits 3.00 PeopleSoft Course ID 012437 Grading Basis GRD

This course will consider art from the age of the prophet Muhammad through the sixteenth century. The political and cultural contexts in which Islamic art developed will lay the foundations for understanding later traditions. These may include the role of the mosque in Muslim society; calligraphy and illustrated books; palace building and the arts of luxury; and modes of figural representation, including issues of gender.

ARTH 360. Nineteenth Century Art

Credits 3.00 PeopleSoft Course ID 002836 Grading Basis GRD

A study of European art (1750-1890) concentrating on Neoclassicism, Romanticism, Realism, Impressionism and Post-Impressionism in France.

Prerequisite(s): *ARTH 206.*

ARTH 372. Modern Art From 1900-1945

Credits 3.00 PeopleSoft Course ID 007527 Grading Basis GRD

A survey of avant-garde art movements from the late nineteenth century to mid-twentieth century. An analysis of the meanings of modernism and modernity in the context of urbanism, industrialism, colonialism and the world wars.

ARTH 380. American Art to 1870

Credits 3.00 PeopleSoft Course ID 010645 Grading Basis GRD

American painting, sculpture, architecture and decorative arts from the Colonial period through 1870. Topics will include Colonial portraiture, African American

aesthetics, the definition of folk art, nationalism and landscape painting, and the question of American exceptionalism. The course will also introduce students to problems of interpretation in current scholarship. **Prerequisite(s):** *ARTH 206.*

ARTH 382. American Art from 1870

Credits 3.00 PeopleSoft Course ID 010623 Grading Basis GRD

American painting, sculpture, architecture and decorative arts from 1870 to 1945. This course will address topics such as the American Renaissance, the Harlem Renaissance, Chicago School architecture, masculinity in Western American art, notions of decay in turn-of-the -century art and American modernism. It will also introduce methodological debates in current scholarship. **Prerequisite(s):** *ARTH 206.*

ARTH 389. Topics in Art History

Credits 3.00 PeopleSoft Course ID 011424 Grading Basis GRD (Repeatable)

Study of selected topics in art history, including museum studies, at the intermediate level. May be repeated when course content changes. See MyMadison for current topics.

ARTH 390. Independent Study in Art History

Credits 1.00 - 3.00 PeopleSoft Course ID 011419 Grading Basis GRD

Independent activity at the intermediate level, such as research or studio practice, under faculty supervision. Projected studies in any area of the school's offering must be arranged with the instructors who will direct them. Offered only with the consent of the instructor.

ARTH 394. Introduction to Museum Work

Cross listed with: *HIST 394*

Credits 3.00 PeopleSoft Course ID 001570 Grading Basis GRD

A study of the philosophy and practice of museum work including the areas of exhibit design, conservation registration, education and administration. Subject is taught from the perspective of the museum profession and is applicable to diverse discipline and types of collections.

ARTH 396. History Beyond the Classroom: Public History

Cross listed with: *HIST 396*

Credits 3.00 PeopleSoft Course ID 010502 Grading Basis GRD

This course introduces the interdisciplinary subfield of public history as it is practiced today. The course examines the various branches of public history through readings, class discussion, exercises, and occasional guest speakers and field trips, when possible.

ARTH 400. Art History Research Portfolio

Credits 0.00 PeopleSoft Course ID 013886 Grading Basis Crd/No Crd

This course is required for all art history majors. In both the fall and spring semesters, majors with junior and senior standing enroll in ARTH 400.

ARTH 404. Topics in the History of Photography

Credits 3.00 PeopleSoft Course ID 013980 Grading Basis GRD

This course may include studies of major photographers or consideration of thematic issues such as the documentary tradition and the New Deal. Topics vary. See MyMadison for current topics.

ARTH 406. Monticello

Cross listed with: *HIST 406*

Credits 3.00 PeopleSoft Course ID 010612 Grading Basis GRD

A seminar on the architecture and material culture of Thomas Jefferson's Monticello. The course will examine the house's design, artwork, decorative arts, mechanical devices, landscape/garden design and Mulberry Row. Topics will include African American artisans at the Monticello joinery, Jefferson's Indian Hall and European and African American domestic life in the Federal Period. Required field trips.

ARTH 408. The Museum: History and Controversies

Cross listed with: HIST 408

Credits 3.00 PeopleSoft Course ID 011799 Grading Basis GRD

This seminar centers on art museums in the United States. Topics include the historical development of museums, related cultures of display, recent debates on institutional mission and responsibility, and contemporary artists who employ the museum as medium, subject matter or site. Required field trips.

Prerequisite(s): ARTH 206.

ARTH 409. Topics in Museum Studies

Credits 3.00 PeopleSoft Course ID 013981 Grading Basis GRD

This course may include the advanced study of individual case studies or critical issues in the field. Topics vary. See MyMadison for current topics.

ARTH 418. Modern and Contemporary African Art

Credits 3.00 PeopleSoft Course ID 012498 Grading Basis GRD

This course examines modern and contemporary art movements in Africa and the African diaspora. Artists, art schools, exhibition strategies and developments in painting, sculpture, photography, video and film illustrate the richness of artistic productions and display, as well as the tensions and triumphs of contemporary Africa and its diaspora. Course work centers on a substantial research paper based on primary source material.

ARTH 419. Topics in African Art

Credits 3.00 PeopleSoft Course ID 010669 Grading Basis GRD

This course will deal with the current thematic or methodological issues such as contemporary African arts and artists, arts of the African Diaspora, a particular media (such as architecture or the textile arts), portraiture and identity, the royal arts of Africa, African film and performance, or gender in the arts of Africa. Topic varies. See MyMadison for current topics.

ARTH 424. Arts of Ancient Egypt

Credits 3.00 PeopleSoft Course ID 010615 Grading Basis GRD

A study of the arts and culture of Ancient Egypt (c. 3000 B.C. to c. 300 B.C.). This course will focus on the art and architecture of the Old and New Kingdoms and also examine the enduring fascination with this unique artistic heritage from the excavations of Napoleon to the present.

ARTH 425. Advanced Topics in Non-Western Art

Credits 3.00 PeopleSoft Course ID 014019 Grading Basis GRD

This course will consider the study of a culture outside of the European and Anglo American traditions at the advanced level. Topics vary. See MyMadison for current topics.

ARTH 426. Advanced Topics in Cross-Cultural Art

Credits 3.00-9.00 PeopleSoft Course ID 013982 Grading Basis GRD

This course will consider the study of two or more artistic traditions that intersect at the advanced level. Topics vary. See MyMadison for current topics.

ARTH 427. Advanced Topics in Pre-Modern Art

Credits 3.00 PeopleSoft Course ID 013983 Grading Basis GRD

This course will consider the study of a culture or tradition before the Modern Age at the advanced level. Topics vary. See MyMadison for current topics.

ARTH 428. Advanced Topics in Modern and Contemporary Art

Credits 3.00 PeopleSoft Course ID 013984 Grading Basis GRD

This course will consider the study of a culture or tradition in the most recent centuries or decades at the advanced level. Topics vary. See MyMadison for current topics.

ARTH 430. Far Eastern Art

Credits 3.00 PeopleSoft Course ID 002584 Grading Basis GRD

A survey of East Asian art from prehistoric times to 19th century colonialism. Emphasis is on the areas of major production: India, China and Japan, with

less attention to such centers as Cambodia, Siam and Korea. **Prerequisite(s):** ARTH 205 or ARTH 206.

ARTH 440. City of Jerusalem

Credits 3.00 PeopleSoft Course ID 013885 Grading Basis GRD

A critical examination of medieval and early modern Jerusalem, c. 1000-1800, with a special focus on the city's religious diversity evidenced through its art and architecture. The course will examine Islamic, Christian and Jewish cultural traditions in the city. **Prerequisite(s):** ARTH 205 or ARTH 206; or MECM minor status.

ARTH 446. Renaissance Art and the East

Credits 3.00 PeopleSoft Course ID 012438 Grading Basis GRD

This seminar explores artistic exchange between the Christian west and competing cultures in the east from c. 1250-1600, focusing on the powers of Italy and their interaction with the Islamic dynasties, the Mamluks of Egypt and the Ottomans in Turkey, as well as the Christian state of Byzantium. Special topics of interest may include palace architecture and imperial ceremony; urban planning; portraiture and caricature; the exchange of luxury goods and the use of art as a diplomatic tool.

ARTH 448. Studies in Leonardo and Michelangelo

Credits 3.00 PeopleSoft Course ID 010622 Grading Basis GRD

Seminar that examines the artworks of Leonardo da Vinci and Michelangelo Buonarroti. Discusses issues such as the artist's creative process, the development of the artist's style, the patron's role in artwork and interrelationships between the artist's visual and literary works. **Prerequisite(s):** ARTH 206.

ARTH 471. Commemoration and Controversy: Public Art in America

Cross listed with: HIST 471

Credits 3.00 PeopleSoft Course ID 012439 Grading Basis GRD

This course examines the socio-historical, political, cultural and philosophical dimensions of public art in American society, from the Early Republic to the present day. Topics may include: the nature of public art, its uses and functions, as well as civic and official attitudes towards art in the public sphere. Issues of censorship, propaganda, and the "culture wars" of the 1980s and 90s will be highlighted.

ARTH 472. Modern Art Since 1945

Credits 3.00 PeopleSoft Course ID 000530 Grading Basis GRD

A study of the many developments and trends in American and European art since 1945. This course will focus on such movements as abstract expressionism, pop, conceptual art, installation art, video, film and computer art with an understanding of the theoretical basis of those movements and the development of the art market during this period.

ARTH 484. Art of the Americas

Credits 3.00 PeopleSoft Course ID 011430 Grading Basis GRD

Art of indigenous peoples in the Americas (Meso, Central, South and /or North) before European contact. The course will examine domestic and state architecture, painting, textiles, ceramics, metalwork, and earthworks within the context of geographic, state, religious and social issues. Other topics include museum display, repatriation and western taxonomies.

ARTH 488. African American Art

Cross listed with: AAAD 488

Credits 3.00 PeopleSoft Course ID 012441 Grading Basis GRD

This course examines visual arts produced by people of African descent in the United States from the colonial period until the present. Course themes include debates about the relationship between racial identity and artistic production; the complex interchange between African American art and the cultural

traditions of Africa and Europe; black artists' engagement with popular representations of African Americans; and the intersection of race with class, gender and sexuality. **Prerequisite(s):** ARTH 206, AAAD 200 or permission of the instructor.

ARTH 489. Topics in Art History

Credits 3.00 PeopleSoft Course ID 000392 Grading Basis GRD (Repeatable)

Study of selected topics in art history at the advanced level. May be repeated when course content changes. See MyMadison for current topics.

ARTH 490. Independent Study in Art History

Credits 1.00 - 3.00 PeopleSoft Course ID 001591 Grading Basis GRD (Repeatable)

Independent activity, such as research or studio practice, under faculty supervision. Projected studies in any area of the school's offering must be arranged with the instructors who will direct them. Offered only with consent of the instructor.

ARTH 491. Exhibition Seminar

Credits 3.00 PeopleSoft Course ID 013133 Grading Basis GRD

Advanced seminar explores museum theory and practice through the collaborative design of an exhibition for an on-campus gallery space. The course focuses on developing and researching the exhibition topic, investigating the specific art objects and preparing critical educational materials or catalogue. The class project also includes mounting the exhibit in a real or virtual installation space. **Prerequisite(s):** ARTH 205 or ARTH 206.

ARTH 492. History From Things: Material Culture

Cross listed with: ANTH 492, HIST 492

Credits 3.00 PeopleSoft Course ID 011024 Grading Basis GRD

This course explores the multidisciplinary "field" of material culture studies and the ways of looking at and learning from objects, things, or "stuff," ranging from furniture and teapots to houses and farmyards. It examines how scholars from a variety of disciplines have used material culture in their work. Readings draw from multiple sources, approaches and methodologies, reflecting the interdisciplinarity of the field.

ARTH 493. Historic Preservation

Cross listed with: HIST 493

Credits 3.00 PeopleSoft Course ID 008457 Grading Basis GRD

An introduction to the philosophy and techniques of historic preservation, guidelines for restoration, state and National Register forms and procedures, historic architecture, structural analysis, restoration techniques as well as the business aspects of historic preservation projects. Field trips are a major component of the course.

ARTH 495. Internship in Art History

Credits 1.00 - 3.00 PeopleSoft Course ID 008404 Grading Basis GRD

An off-campus program prepared and monitored on an individual basis. Internships are designed to provide practical experience in the arts. **Prerequisite(s):** Permission of the instructor and ARTH 394 if in museums and galleries.

ARTH 499. Honors

Credits 6.00 PeopleSoft Course ID 007520 Grading Basis GRD credits total for three semesters (1,3,2)

Astronomy

ASTR 120. The Solar System [C3PP]

Credits 3.00 PeopleSoft Course ID 006448 Grading Basis GRD

An introductory course in astronomy, which includes the following topics: motions of celestial objects, eclipses, historical development, the nature of

light, telescopes, properties and evolution of the solar system. May be used for general education credit.

ASTR 121. Stars, Galaxies, & Cosmology [C3PP]

Credits 3.00 PeopleSoft Course ID 010546 Grading Basis GRD

An introductory course in astronomy which includes the following topics: the Sun, stellar properties, stellar evolution, black holes, the Milky Way, galactic evolution, quasars, cosmology. May be used for general education credit.

ASTR 220. General Astronomy I: The Night Sky, the Solar System and Stars

Credits 3.00 PeopleSoft Course ID 009657 Grading Basis GRD

ASTR 220 is the first in a two-course sequence in general astronomy intended for students with a background in physics. Topics covered include: appearance and movements of the night sky; astronomical coordinate systems and timekeeping; seasons, eclipses and planetary configurations; planetary motions and gravitation; fundamental forces; electromagnetic radiation and its detection; content, structure, formation and evolution of solar system; observations and models of the Sun, stellar interior models; stellar magnitudes and spectra, classifications; Hertzsprung-Russell diagram. **Prerequisite(s):** PHYS 140 or PHYS 240.

ASTR 221. General Astronomy II: Star Systems, the Interstellar Medium, and Cosmology

Credits 4.00 PeopleSoft Course ID 010904 Grading Basis GRD

ASTR 221 is the second in a two-course sequence in general astronomy intended for students interested in science. Topics covered include : stellar evolution; variability and high-energy phenomena in stars and multiple-star systems; content, structure, and dynamics of the Milky Way; external galaxies, quasars and AGN; large-scale structure and the distance scale of the universe; the Big Bang model and alternative cosmologies, possible geometries and eventual fates of the universe. An observational astronomy laboratory component is part of this course. The lab component will cover basics of telescope set up and operation as well as astronomical coordinate systems.

Prerequisite(s): ASTR 220.

ASTR 297. Topics in Astronomy

Credits 1.00 - 4.00 PeopleSoft Course ID 012214 Grading Basis GRD

Topics in astronomy at the second year level. May be repeated for credit when course content changes. Topics selected may dictate prerequisites. Students should consult instructor prior to enrolling for course.

Prerequisite(s): Permission of the instructor.

ASTR 301. Searching for Life in the Universe

Credits 3.00 PeopleSoft Course ID 012099 Grading Basis GRD

A study of the search for life in the universe, with emphasis on teacher preparation. Topics include how life on earth can guide the search, conditions for life within our solar system, extrasolar planets that may be conducive to life, possible radio communications with other civilizations and technologies necessary for search. Significant time is spent developing student lesson plans.

Prerequisite(s): ISCI 171 and ISCI 172.

ASTR 320. Astronomical Techniques

Credits 3.00 PeopleSoft Course ID 011369 Grading Basis GRD

An overview of modern astronomical techniques with an emphasis on quantitative data collection and analysis. The design and use of various astronomical devices will be covered. Topics will include visible light telescopes and radio telescopes as well as CCD data collection in addition to other current astronomical techniques. Data reduction software will also be addressed. **Prerequisite(s):** ASTR 220 and ASTR 221.

ASTR 330. Relativity

Cross listed with: PHYS 330

Credits 4.00 PeopleSoft Course ID 013852

The basic mathematical descriptions of both Einstein's special and general theories of relativity are introduced through specific physical cases and calculus-based lectures. Special relativity is explored through its physical consequences on a variety of phenomena. General relativity is studied by considering the effects of gravity on space-time curvature on astrophysical objects. Simple numerical experiments in both special and general relativity will be conducted as class projects. **Prerequisite(s):** *PHYS 260 and MATH 237, or permission of instructor.*

ASTR 398. Independent Study in Physics or Astronomy

Cross listed with: *PHYS 398*

Credits 1.00 - 3.00 PeopleSoft Course ID 000903 Grading Basis GRD
Repeatable to 4 credits.

An individual project related to some aspect of physics or astronomy. Must be under the guidance of a faculty adviser. A student may not earn more than a total of four credits for ASTR/PHYS 398.

ASTR 480. Astrophysics

Credits 3.00 PeopleSoft Course ID 003716 Grading Basis GRD

An introduction to the problems of modern astronomy and the quantitative application of physical principles to these problems. Topics of study include stellar structure and evolution, the interstellar medium and star formation, cosmic rays, pulsars, galactic structure, extragalactic astronomy and cosmology. **Prerequisite(s):** *PHYS 340 and PHYS 380.*

ASTR 498R. Undergraduate Research in Physics or Astronomy

Cross listed with: *PHYS 498R*

Credits 1.00 - 4.00 PeopleSoft Course ID 008330 Grading Basis GRD
Repeatable to 6 credits.

Research in a selected area of physics or astronomy as arranged with a faculty research adviser. A student may not earn more than a total of six credits for ASTR/PHYS 498R. **Prerequisite(s):** *Proposal for study must be approved prior to registration.*

Athletic Training Education Program

ATEP 205. Introduction to Athletic Training

Credits 3.00 PeopleSoft Course ID 010369 Grading Basis GRD

This course provides a broad introduction to the profession of athletic training. Lectures focus on the domains of athletic training. Emphasis is placed on basic emergency management as well as injury prevention including environmental issues, strength and conditioning, and selection of equipment.

ATEP 291. Pre-Professional Practicum in Athletic Training

Credits 2.00 PeopleSoft Course ID 010514 Grading Basis GRD

This course is designed to help students better understand the duties and responsibilities of the athletic trainer. By focusing on psychomotor skills and the application of didactic knowledge, students build a foundation which prepares them for future clinical rotations. **Prerequisite(s):** *Permission of the instructor.*

ATEP 306. Athletic Injury Recognition

Credits 3.00 PeopleSoft Course ID 010506 Grading Basis GRD

This course introduces students to musculoskeletal pathologies common in physically active individuals. Students will demonstrate an understanding of common mechanisms, risk factors and clinical presentation of musculoskeletal pathologies. Students will integrate their medical and anatomical terminology and hands-on skills used in injury evaluation. **Prerequisite(s):** *BIO 290/BIO 290L.*

Biology

BIO 103. Contemporary Biology [C3NS]

Credits 3.00 PeopleSoft Course ID 007843 Grading Basis GRD

An in-depth exploration of selected biological concepts connected to current, relevant topics and emphasizing an understanding of science as a way of obtaining knowledge. Not available for major or minor credit in biology or biotechnology. Students may not receive credit for both ISCI 103 and BIO 103. May be used for general education credit. May not be used for major credit.

BIO 110. First Year Seminar in Biology

Credits 1.00 PeopleSoft Course ID 013651 Grading Basis CNC

Orientation to the biology and biotechnology majors for first year students, including freshmen and transfer students. Course content includes introduction to the biology/biotechnology curriculum, academic plan building, time management and study skills, stress and anxiety management, campus student resources, undergraduate research, graduate school considerations, and discussion of biology career options. Course provides university elective credit. Not available for biology or biotechnology major credit. Course is offered credit/no-credit.

BIO 140. Foundations of Biology I [C3NS]

Credits 3.00 PeopleSoft Course ID 013743 Grading Basis GRD

The foundations of the cellular molecules, structures and processes that sustain life in the context of evolution will be explored. Topics will include structure and function; information flow, storage and exchange; pathways and transformations of energy and matter; and systems biology. **Prerequisite(s):** *BIO 140L. Corequisite(s):* *BIO 140L.*

BIO 140L. Foundations of Biology I Laboratory [C3L]

Credits 1.00 PeopleSoft Course ID 014328 Grading Basis GRD

Students learn the process of science and the basics of experimental design while building scientific writing skills. Students learn foundational techniques of molecular biology (pipetting, DNA extraction, PCR, gel electrophoresis and basic bioinformatics) in the context of a DNA Barcoding project. Students will leave this course with the preparation needed to design their own independent DNA barcoding projects. **Prerequisite(s):** *BIO 140. Corequisite(s):* *BIO 140.*

BIO 150. Foundations of Biology II

Credits 3.00 PeopleSoft Course ID 013722 Grading Basis GRD

Foundations II focuses on the diversity of life, anatomy and physiology of organisms and ecological organization in an evolutionary context. This class will explore structure and function; how information is transmitted; transformations of energy and matter; and how biological units act as integrated systems. The process of science, interdisciplinary approaches and the relevance of biology to society will be addressed. **Prerequisite(s):** *BIO 150L and minimum grade of "C-" in BIO 140 and BIO 140L. Corequisite(s):* *BIO 150L.*

BIO 150L. Foundations of Biology II Laboratory

Credits 1.00 PeopleSoft Course ID 014329 Grading Basis GRD

Student teams develop and execute semester-long independent research projects using DNA barcoding. Students will learn how to ask scientific questions, explore scientific literature, design scientific studies, analyze and interpret data, and share results using images and scientific writing. This lab emphasizes the development and refinement of research techniques in molecular biology, critical thinking, study design, teamwork and skills in finding, reading and writing scientific literature. Students will leave this course with a deeper understanding of the process of science, an introduction to bioinformatics and molecular biology, and improved skills in scientific communication. **Prerequisite(s):** *BIO 150 and minimum grade of "C-" in BIO 140 and BIO 140L. Corequisite(s):* *BIO 150.*

BIO 200. Major Biology Elective

Credits 1.00 - 4.00 PeopleSoft Course ID 011047 Grading Basis OPT

This course is awarded for lower division transfer elective credit applicable toward the biology major or minor. A maximum of four hours may be transferred and used toward the major or minor. Additional hours may be transferred as BIO 000.

BIO 201. Trelawny Learning Community Seminar I**Credits 1.00 PeopleSoft Course ID 011398 Grading Basis GRD**

The first part of the research skills seminar for first-year students in the Trelawny Learning Community. In addition to lab/field work with faculty or graduate students for 2-3 hours per week, students attend a weekly seminar. Seminar includes research skill and team-building exercises, guest speakers and case studies geared toward a career in science. Faculty and students interact with community members to provide perspectives on the major and research in a scientific network. **Corequisite(s):** *Membership in the Trelawny Learning Community.*

BIO 202. Trelawny Learning Community Seminar II**Credits 2.00 PeopleSoft Course ID 011858 Grading Basis GRD**

The second part of the research skills seminar for first-year students in the Trelawny Learning Community. Students will have already begun research projects during fall semester, and will continue their projects into spring semester while continuing to build research skills. Students will take part in community, campus and social events and gain experience helping to run a research-based event. **Prerequisite(s):** *BIO 201.* **Corequisite(s):** *Membership in the Trelawny Learning Community.*

BIO 203. Viral Discovery

Cross listed with: *ISAT 203*

Credits 2.00 PeopleSoft Course ID 012283 Grading Basis GRD

An exploratory laboratory experience, designed for incoming freshmen. Students will learn about the life cycle and ecology of viruses infecting bacteria. Soil samples will be collected, and techniques for isolation and purification of the viruses will be performed by the students. Isolated viruses will be visualized using electron microscopy. The genomic material will be isolated and prepared for nucleic acid sequencing.

BIO 204. Viral Genome and Bioinformatics

Cross listed with: *ISAT 204*

Credits 2.00 PeopleSoft Course ID 012284 Grading Basis GRD

A computer-based laboratory experience, designed for students completing the Viral Discovery course. Students will learn to identify genes in a viral genome, compare the predicted proteins with known proteins in databases, describe the contents of the genome and notate all the relevant information for publication. Students will also research the role of bacteriophages in ecology and evolution.

Prerequisite(s): *BIO 203 or ISAT 203*

BIO 226. Introductory Topics in Biology (Variable)**Credits 1.00 - 4.00 PeopleSoft Course ID 013197 Grading Basis GRD**

Introductory studies in specific areas of biology. May be repeated for credit when course content changes.

BIO 240. Genetics**Credits 3.00 PeopleSoft Course ID 011046 Grading Basis GRD**

Students will explore how genetic information is utilized throughout the lifetime of the organism. The course focuses on the flow of information and evolutionary principles through the lenses of classical and molecular genetics and genomics. **Prerequisite(s):** *BIO 240L and minimum grade of "C-" in BIO 150 and BIO 150L.* **Corequisite(s):** *BIO 240L.*

BIO 240L. Genetics Laboratory**Credits 1.00 PeopleSoft Course ID 014330 Grading Basis GRD**

Students will explore both classic and molecular genetic techniques using genetic model organisms. Additionally, students will learn how to analyze large data sets using widely available data bases, data analysis programs and introductory coding. **Prerequisite(s):** *BIO 240 and minimum grade of "C-" in BIO 150 and BIO 150L.* **Corequisite(s):** *BIO 240.*

BIO 245. General Microbiology**Credits 3.00 PeopleSoft Course ID 000326 Grading Basis GRD**

A study of the microorganisms, their significance, evolution, structure and function, genetics and the systems in which they exist. **Prerequisite(s):** *BIO 245L and BIO 103 or BIO 140 or CHEM 120 or CHEM 131 or ISCI 101 or equivalent.* **Corequisite(s):** *BIO 245L and BIO 103 or BIO 140 or CHEM 120 or CHEM 131 or ISCI 101 or equivalent.*

BIO 245L. General Microbiology Laboratory**Credits 1.00 PeopleSoft Course ID 014332 Grading Basis GRD**

This laboratory course is designed to complement and supplement the BIO 245 lecture course. **Prerequisite(s):** *BIO 245 and BIO 103 or BIO 140/BIO 140L or CHEM 120 or CHEM 131 or ISCI 101 or equivalent.* **Corequisite(s):** *BIO 245 and BIO 103 or BIO 140/BIO 140L or CHEM 120 or CHEM 131 or ISCI 101 or equivalent.*

BIO 246. Microbiology Seminar**Credits 1.00 PeopleSoft Course ID 013768**

Seminars, readings and discussions of the primary scientific literature with a focus on the current research in the field of microbiology. **Prerequisite(s):** *BIO 140/BIO 140L and declared microbiology concentration.*

BIO 250. Quantitative Ecology and Evolution**Credits 3.00 PeopleSoft Course ID 011044 Grading Basis GRD**

Students will use an interactive e-text application to explore the changing natural world through modeling and simulation in a discovery-based classroom environment. Throughout every unit, the relationship among evolution, ecology and the environment are woven together using current research from primary literature. Evolution is explored in many relevant contexts, including artificial and natural selection of GMOs and of antibiotic resistance. In a module covering the evolution of decision making, students will learn quantitative approaches to game theory, optimal foraging and sexual selection. An understanding of population ecology and evolution is gained as students manipulate models to understand competition and predator-prey dynamics with real case studies of both microbes and endangered species. Climate change is discussed through the use of mathematical models and current and historical data. **Prerequisite(s):** *BIO 250L and grade of "C-" or better in BIO 150 and BIO 150L, or GEOL 110, GEOG 210 or ISAT 112.* **Corequisite(s):** *BIO 250L.*

BIO 250L. Quantitative Ecology and Evolution Laboratory**Credits 1.00 PeopleSoft Course ID 014331 Grading Basis GRD**

Hands-on laboratory and field-based experiences which emphasize experimental design and both statistical and quantitative analyses, with an emphasis on oral and written professional communication. **Prerequisite(s):** *BIO 250 and grade of "C-" or better in BIO 150 and BIO 150L, or GEOL 110, GEOG 210 or ISAT 112.* **Corequisite(s):** *BIO 250.*

BIO 260. Foundations of Human Anatomy and Physiology**Credits 4.00 PeopleSoft Course ID 014173 Grading Basis GRD**

An introduction to anatomy (structure) and physiology (function) of the human body and its organ systems which will provide a strong foundation in the relationship of human structure and function. BIO 260 is designed to meet the Virginia Science Content educational guidelines for A&P. Credit may not be earned in both BIO 260 and BIO 270/BIO 270L and BIO 290/BIO 290L.

Prerequisite(s): *BIO 140 and BIO 140L; Students in the following majors and*

minors are not eligible for this course: Dietetics, Health Sciences, Kinesiology and Nursing majors, and Pre-Physical Therapy, Pre-Occupational Therapy, Pre-Physician Assistant, Pre-Athletic Training, Pre-Pharmacy, Pre-Dentistry and Pre-Optometry minors.

BIO 270. Human Physiology [C3NS]

Credits 3.00 PeopleSoft Course ID 008185 Grading Basis GRD

An introduction to basic physiological principles using humans as the primary organism. Physiological adaptations will be examined at the molecular through organismal levels. Intended for students in health-related fields and Cluster 3 of the General Education program. Not available for biology or biotechnology major credit. Credit for BIO 270/BIO 270L and BIO 290/BIO 290L may be transferred together to JMU only when transferrable credits for two semesters of anatomy and physiology (I & II) are completed at the same institution. A single semester transfer, or courses from different institutions, transfer as BIO 000. **Prerequisite(s):** *BIO 270L; CHEM 120 or CHEM 131 or equivalent; and MATH 220 or MATH 229 or COB 191 or equivalent. Credit may not be earned in both BIO 270/BIO 270L and BIO 260. Corequisite(s):* *BIO 270L; CHEM 120 or CHEM 131 or equivalent; and MATH 220 or MATH 229 or COB 191 or equivalent.*

BIO 270L. Human Physiology Laboratory [C3L]

Credits 1.00 PeopleSoft Course ID 009108 Grading Basis GRD

This laboratory course is conducted to directly observe how the body's systems work and how scientific knowledge is accumulated in conjunction with the BIO 270 lecture course. Organizational and leadership skills are promoted by individual and group laboratory activities. Credit for BIO 270L and BIO 290L may be transferred together to JMU only when transferrable credits for two semesters of anatomy and physiology (I & II) lab are completed at the same institution. A single semester transfer, or courses from different institutions, transfer as BIO 000. **Prerequisite(s):** *BIO 270, CHEM 120 or CHEM 131 or equivalent, and MATH 220 or MATH 229 or COB 191 or equivalent. Credit may not be earned in both BIO 270/BIO 270L and BIO 260. Corequisite(s):* *BIO 270, CHEM 120 or CHEM 131 or equivalent, and MATH 220 or MATH 229 or COB 191 or equivalent.*

BIO 290. Human Anatomy

Credits 3.00 PeopleSoft Course ID 006982 Grading Basis GRD

A regionally based study of the human body. Emphasis on major body structures and function is reinforced through hands-on examination of prosected cadaver specimens and other anatomical resources during the prerequisite or corequisite laboratory experience. Credit for BIO 270/BIO 270L and BIO 290/BIO 290L; may be transferred together to JMU only when transferrable credits for two semesters of Anatomy & Physiology (I & II) are completed at the same institution. A single semester, or courses from different institutions, transfer as BIO 000. **Prerequisite(s):** *BIO 290L. Credit may not be earned in both BIO 290/BIO 290L and BIO 260. Corequisite(s):* *BIO 290L.*

BIO 290L. Human Anatomy Laboratory

Credits 1.00 PeopleSoft Course ID 014333 Grading Basis GRD

A regionally-based study of the human body. Emphasis on major body structures and function through hands-on examination of prosected cadaver specimens and other anatomical resources. Credit for BIO 270L and BIO 290L may be transferred together to JMU only when transferrable credits for two semesters of anatomy and physiology (I & II) lab are completed at the same institution. A single semester transfer, or courses from different institutions, transfer as BIO 000. **Prerequisite(s):** *BIO 290. Credit may not be earned in both BIO 290/BIO 290L and BIO 260. Corequisite(s):* *BIO 290.*

BIO 301. Introductory Neuroscience

Credits 3.00 PeopleSoft Course ID 012525 Grading Basis GRD

This course will examine molecular control of neuronal function. Topics include the structure and function of neuronal excitability, chemical and contact mediated neuronal communication, developing and regenerating nervous systems, sensation and perception, learning and memory formation, repair from neuronal damage, and the neuronal pathways of sensation and motor control. In the context of these subjects, we will review the neuronal alterations that cause some common brain diseases. **Prerequisite(s):** *BIO 140/BIO 140L and CHEM 132, or by permission of instructor for PSYC majors.*

BIO 304. Cell and Molecular Biology

Credits 3.00 PeopleSoft Course ID 013904 Grading Basis GRD

Students will develop a deeper understanding of the molecular mechanisms employed by procaryotic and eucaryotic cells. Topics will include (1) macromolecular structure and function and how macromolecules coordinate to maintain life, (2) molecular mechanisms that regulate the synthesis and flow of genetic information and (3) molecular aspects of homeostasis, bioenergetics and cell signaling. **Prerequisite(s):** *Minimum grade of "C" in BIO 240/BIO 240L and CHEM 132/CHEM 132L.*

BIO 310. Marine Biology

Credits 3.00 PeopleSoft Course ID 013859 Grading Basis GRD

An exploration of the functional biology, ecology, and biodiversity of marine organisms. Students will be provided with a general understanding of how the ocean works and how marine organisms operate within their environment. The diversity of marine organisms in the open sea and benthos will be surveyed and a discussion of the numerous threats impacting various marine ecosystems will also be included. **Prerequisite(s):** *BIO 250/BIO 250L.*

BIO 312. Animal Welfare

Credits 3.00 PeopleSoft Course ID 004145 Grading Basis GRD

An examination of the biological basis of animal welfare. Topics include the evolution of domestic animals, physiological and behavioral measurements of stress, welfare assessment and pain perception. Case studies examine the use of animals for companionship, food, medical research and entertainment. **Prerequisite(s):** *BIO 250/BIO 250L.*

BIO 316. Animal Development

Credits 3.00 PeopleSoft Course ID 005075 Grading Basis GRD

This course integrates cell and molecular biology and genetics to understand the processes and mechanisms underlying body plan formation and organ formation in vertebrate animals and insects. The course additionally covers the development of muscle, skeleton and nervous tissues, the postembryonic phenomena of growth, metamorphosis and regeneration, and the developmental basis of evolutionary changes in animal anatomy. **Prerequisite(s):** *BIO 240/BIO 240L.*

BIO 318. Experimental Vertebrate Development

Credits 2.00 PeopleSoft Course ID 013157 Grading Basis GRD

Students design and carry out independent research projects on different aspects of frog or chick development. Skills include manipulating live embryos, raising embryos and larvae from eggs, using wax histology to make microscope slides, immunohistochemistry, 3D reconstruction and morphometry-based analyses, and filming animal behavior. Projects are hypothesis-driven and investigate patterns, mechanisms and behaviors involved in the development of skeleton, lungs, tails, limbs and other organs. **Prerequisite(s):** *BIO 140/BIO 140L.*

BIO 320. Comparative Anatomy of Vertebrates

Credits 4.00 PeopleSoft Course ID 006337 Grading Basis GRD

A study of the evolution of vertebrate organ systems that integrates structure, function and development. **Prerequisite(s):** *BIO 150/BIO 150L or BIO 290/BIO 290L.*

BIO 324. Human Genetics

Credits 3.00 PeopleSoft Course ID 009094 Grading Basis GRD

An intermediate genetics course with an emphasis on human biology. Topics include cytogenetics, pedigree analysis, quantitative traits, mutation, epigenetics, genomics and ethical issues raised by developing technologies.

Prerequisite(s): *BIO 240/BIO 240L.*

BIO 340. Morphology and Anatomy of Vascular Plants

Credits 4.00 PeopleSoft Course ID 004726 Grading Basis GRD

A detailed study of the comparative morphology and anatomy of tracheophytes.

Prerequisite(s): *BIO 150/BIO 150L or BIO 250/BIO 250L.*

BIO 342. Mathematical Models in Biology

Cross listed with: *MATH 342*

Credits 3.00 PeopleSoft Course ID 012097 Grading Basis GRD

Introduction to dynamical models (discrete and continuous time) applied to biology. Tools of mathematical analysis from linear and nonlinear dynamics will be taught, including stability analysis of equilibria, as well as appropriate use of software packages. Emphasis will be on model development and interpretation in the context of applications, including effective written and oral presentation.

Prerequisite(s): *MATH 232 or MATH 235 or equivalent.*

BIO 343. Immunology

Credits 3.00 PeopleSoft Course ID 000112 Grading Basis GRD

A study of the molecular and cellular basis of the immune system. Topics include the properties of antigens and immunoglobulins, the development and regulation of humoral and cell-mediated immunity, resistance and immunization to infectious diseases, allergies and autoimmune and immunodeficiency disorders. **Prerequisite(s):** *BIO 240/BIO 240L or permission of the instructor.*

BIO 343L. Immunology Laboratory

Credits 1.00 PeopleSoft Course ID 011500 Grading Basis GRD

This course will introduce students to the theory and application of many of the methods currently used in clinical and research immunology. Laboratory exercises will focus on methods for identifying, quantifying and assessing functional activities of immune cells and molecules. Students will gain experience using experimental animals and in animal cell culture techniques.

Corequisite(s): *BIO 343.*

BIO 346. Laboratory in Bacterial Pathogenomics

Credits 2.00 PeopleSoft Course ID 013766 Grading Basis GRD

A course-based-research laboratory course. Students isolate pathogenic bacteria from environmental samples, identify and characterize them, and sequence their whole genomes. Students learn the basics of microbial genomics, including genome assembly, annotation and comparative genomics methods to study mobile genetic elements, virulence, antibiotic resistance, etc. They also learn how these methods are used in the epidemiological tracking of pathogens. **Prerequisite(s):** *Minimum grade of "C" in BIO 245/BIO 245L.*

BIO 348. Medical Microbiology

Credits 3.00 PeopleSoft Course ID 011974 Grading Basis GRD

Students will learn about microorganisms of medical importance, mainly bacteria and viruses. Key topics for each organism include general cell structure, unique structures/functions, epidemiology of the disease that the organism causes, mechanisms of pathogenesis, isolation and identification of the organism, and treatment options. **Prerequisite(s):** *Minimum grade of "C" in BIO 245/BIO 245L.*

BIO 348L. Medical Microbiology Laboratory

Credits 1.00 PeopleSoft Course ID 013772 Grading Basis GRD

This laboratory course consists of a series of case studies that require the students to identify the likely causative agent of the symptoms described in the case study. **Prerequisite(s):** *BIO 348.* **Corequisite(s):** *BIO 348.*

BIO 350. Paleobiology

Cross listed with: *GEOL 350*

Credits 4.00 PeopleSoft Course ID 009946 Grading Basis GRD

The evolution and ecological structure of the biosphere from the origin of life to the present, emphasizing the evolution and paleobiology of animal life as shown by the fossil record. Lectures discuss methods used to interpret the fossil record and cover topics such as phylogeny and systematics, functional morphology, biostratigraphy, paleoecology, evolution and extinction. Laboratories focus on the major groups of invertebrates that are common in the geologic record. **Prerequisite(s):** *GEOL 230, BIO 150/BIO 150L or permission of the instructor.*

BIO 354. Global Climate Change and Life: Ecological and Biological Impacts of Climate Variability

Credits 4.00 PeopleSoft Course ID 012528 Grading Basis GRD

Global climate change is important to the distribution, diversity, health and survival of organisms. The biota have changed through evolution in part as a response to selection pressures from these variations. Living things can also adjust to change through phenotypic flexibility. This course examines, in a seminar/discussion format, the potential ecological impacts of past and current patterns of climate alteration on organisms. **Prerequisite(s):** *Minimum grade of "C-" in one of the following: BIO 140/BIO 140L, GEOL 110, GEOL 115, ISAT 112, GEOG 210 or CHEM 353.*

BIO 357. Galápagos Islands: Biodiversity and Conservation

Credits 3.00 PeopleSoft Course ID 013960 Grading Basis GRD

A detailed study of the biodiversity, conservation, biogeography and natural history of the Galápagos Islands. **Prerequisite(s):** *BIO 150/BIO 150L.*

BIO 360. Plant Biology

Credits 3.00 PeopleSoft Course ID 012542 Grading Basis GRD

An introduction to the biology of plants including evolution, diversity, form and function, ecology and biotechnology. **Prerequisite(s):** *BIO 150/BIO 150L.*

BIO 360L. Plant Biology Laboratory

Credits 1.00 PeopleSoft Course ID 014243 Grading Basis GRD

An exploration of plant structure, function, evolution and biological diversity.

Prerequisite(s): *BIO 360.* **Corequisite(s):** *BIO 360.*

BIO 361. Biochemistry I

Cross listed with: *CHEM 361*

Credits 3.00 PeopleSoft Course ID 000693 Grading Basis GRD

An introduction to the molecules and chemical reactions of living systems. Structure and function of important classes of biomolecules are explored and the relationship of structure to function is stressed. Basic metabolic sequences are discussed. **Prerequisite(s):** *CHEM 241 and permission of the instructor.*

BIO 364. Human Uses of Plants

Credits 3.00 PeopleSoft Course ID 010545 Grading Basis GRD

A survey of past, present and future uses of plants with emphasis on economically important plant families. Issues of cultivated plant origins, biodiversity and germplasm preservation are considered. **Prerequisite(s):** *BIO 150/BIO 150L or BIO 250/BIO 250L.*

BIO 364L. Laboratory in Human Uses of Plants

Credits 1.00 PeopleSoft Course ID 010544 Grading Basis GRD

An investigative examination of plants and their constituents with an emphasis on their physiological ecology, adaptations and economic utilization by humans. **Prerequisite(s):** BIO 364. **Corequisite(s):** BIO 364.

BIO 370. Animal Physiology

Credits 4.00 PeopleSoft Course ID 004279 Grading Basis GRD

Design and function of cellular and organ physiology will be explored in both non-human and human animals. Class activities will emphasize problem-solving and collaborative and independent learning. The laboratories will utilize computer simulations and animal/human experiments to examine principles of both physiology and scientific investigation. **Prerequisite(s):** CHEM 132 and BIO 240/ BIO 240L (minimum grade of "C-" in both lab and lecture) or BIO 304. One semester each of calculus and statistics is recommended.

BIO 375. Sensation and Perception

Cross listed with: PSYC 375

Credits 3.00 PeopleSoft Course ID 001648 Grading Basis GRD

This course explores the nature and development of human sensory capabilities and processing, and how these affect perception of the environment. A potential list of the variety of systems reviewed includes hearing, vision, smell, taste and touch/pain, as well as phenomena such as the perception of balance. **Prerequisite(s):** Psychology majors: PSYC 211 or PSYC 213. Biology majors: Declared biology neuroscience concentration, PSYC 101 or PSYC 160, and MATH 220, MATH 229, MATH 285 or MATH 318.

BIO 385. Biopsychology

Cross listed with: PSYC 385

Credits 3.00 PeopleSoft Course ID 001958 Grading Basis GRD

This course is a survey of the neurological and chemical mechanisms which control behavior. Students will examine the brain and how it processes sensation, perception, cognition, movement, motivation, learning, memory and other behavioral processes of interest to psychologists. **Prerequisite(s):** Psychology majors: PSYC 211 or PSYC 213. Biology majors: Declared biology neuroscience concentration, PSYC 101 or PSYC 160, and MATH 220, MATH 229, MATH 285 or MATH 318.

BIO 386. Field Botany

Credits 4.00 PeopleSoft Course ID 010910 Grading Basis GRD

An in-depth survey of vascular plants in the field with emphasis on identification, diversity of form and function, and ecology. Laboratory topics will include techniques for sampling plant communities, identifying local flora and preserving botanical materials. **Prerequisite(s):** BIO 150/BIO 150L or BIO 250/BIO 250L.

BIO 387. Environmental Microbiology

Credits 3.00 PeopleSoft Course ID 013765

An examination of microbial diversity in the environment and the functional role of microbes in ecosystems around the world. **Prerequisite(s):** Minimum grade of "C-" in BIO 245/BIO 245L.

BIO 387L. Environmental Microbiology Laboratory

Credits 1.00 PeopleSoft Course ID 013764 Grading Basis GRD

This course is a field-based investigative lab experience exploring the structure and function of microbial communities and applications of microbiology. **Prerequisite(s):** BIO 387. **Corequisite(s):** BIO 387.

BIO 395. Comparative Animal Behavior

Cross listed with: PSYC 395

Credits 3.00 PeopleSoft Course ID 004319 Grading Basis GRD

This course covers aspects of the development, function and evolution of the behavior of nonhuman animals. Topics include intraspecies communication, feeding, aggression, territoriality, reproductive behavior and social behavior.

Prerequisite(s): Psychology majors: PSYC 211 or PSYC 213; biology or biotechnology majors: BIO 124 or BIO 250/BIO 250L, and one of the following (minimum grade of "C-"): MATH 205, MATH 220, MATH 231, MATH 235, MATH 285, and MATH 318.

BIO 400. Geology and Ecology of the Bahamas

Cross listed with: GEOL 400

Credits 3.00 PeopleSoft Course ID 012727 Grading Basis GRD

This course explores the geology and ecology of the shallow-water marine environment by examining the preeminent modern example, the Bahamas platform. The Bahamas provide an excellent model for understanding modern and ancient carbonate and reef deposits and a variety of terrestrial/aquatic habitats. Biological processes are responsible for many of the geological features of the Bahamas, so the course considers the biology/ecology of marine organisms in addition to geological topics. **Prerequisite(s):** GEOL 110L or GEOL 115L or GEOL 211 or a 200- level GEOL or BIO course; at least four hours of additional lab science, at least sophomore status, and permission of the instructor.

BIO 402. Forest Ecology

Cross listed with: BIO 502

Credits 4.00 PeopleSoft Course ID 012982 Grading Basis GRD

A study of the function, structure and composition of forested ecosystems. The effect of physical geography on the distribution of forest communities will be explored. Issues of forest management and restoration will also be considered. Field laboratory topics will include dendrology and sampling techniques within different forest successional stages. **Prerequisite(s):** BIO 250/BIO 250L.

BIO 404. Evolutionary Analysis

Credits 3.00 PeopleSoft Course ID 008839 Grading Basis GRD

An examination of the place of theoretical thought in biology. The concepts of phylogenetic relationships and the mechanisms of organic change as expressed through the principles of organic evolution will be stressed.

Prerequisite(s): BIO 240/BIO 240L or permission of the instructor.

BIO 405. Vertebrate Paleontology

Cross listed with: GEOL 405

Credits 3.00 PeopleSoft Course ID 001882 Grading Basis GRD

A study of the origin and evolution of the vertebrates. Emphasis will be on understanding how the processes of Earth evolution and biological evolution have interacted through time to produce a coherent picture of vertebrate history. **Prerequisite(s):** GEOL 230 or BIO 150/BIO 150L or BIO 250/BIO 250L or permission of the instructor.

BIO 410. Advanced Human Anatomy

Credits 3.00 PeopleSoft Course ID 007322 Grading Basis GRD

An advanced study of topics in human anatomy using dissection techniques.

Prerequisite(s): BIO 290/BIO 290L and/or BIO 320 and permission of the instructor.

BIO 412. Mammalogy

Credits 4.00 PeopleSoft Course ID 012487 Grading Basis GRD

An introduction to the study of mammals, incorporating evolutionary history, general physiology, reproductive biology, systematics, ecology, wildlife management and behavior, followed by review of mammalian taxonomic orders. Lecture is reinforced with laboratory and field experience. Completion of BIO 320 recommended. **Prerequisite(s):** BIO 150/BIO 150L or BIO 250/BIO 250L.

BIO 415. Neuroanatomy and Neurogenic Communication Disorders

Cross listed with: CSD 415

Credits 3.00 PeopleSoft Course ID 004859 Grading Basis GRD

Introduces neurogenic communication disorders from a neuroanatomical approach.

BIO 418. Conservation Biology

Credits 3.00 PeopleSoft Course ID 014489 Grading Basis GRD

Conservation biology is the study and management of biodiversity with the aim of protecting species, their habitats and ecosystems from excessive rates of extinction. The course will focus on ecological theory, population dynamics, conservation and restoration strategies, and ethical questions for conservation. The course will also teach students to analyze open-ended questions via case studies. **Prerequisite(s):** BIO 250 and BIO 250L with a minimum grade of "C-."

BIO 420. Medical Parasitology

Cross listed with: BIO 520

Credits 3.00 PeopleSoft Course ID 000540 Grading Basis GRD

The study and medical implications of parasites that infect humans. Class activities will emphasize parasite morphology, modes of transmission, mechanisms of host entry and infection, niche selection, life cycles, pathogenesis, diagnosis, and treatment and control. **Prerequisite(s):** BIO 240/BIO 240L or by permission of the instructor.

BIO 426. Topics in Biology

Credits 1.00 - 4.00 PeopleSoft Course ID 010906 Grading Basis GRD

Specified areas of biology. May be repeated for credit when course content changes. **Prerequisite(s):** See MyMadison for prerequisites for specific topics.

BIO 427. Topics in Biology with Laboratory

Credits 1.00 - 4.00 PeopleSoft Course ID 011616 Grading Basis GRD

Laboratory studies in special areas of biology to accompany BIO 426 or stand alone. May be repeated for credit when course content changes.

Prerequisite(s): See MyMadison for prerequisites for specific topics.

BIO 430. Ornithology: Research and Current Advances

Cross listed with: BIO 530.

Credits 4.00 PeopleSoft Course ID 014166 Grading Basis GRD

Students will design and engage in course-based research projects using modern approaches to ornithology. Classes will investigate current primary literature on ornithological research, recent technological advances and conservation. Lectures and labs will explore the biodiversity of birds, identification by sight and sound, and the ecology, evolution, physiology and behavior of birds. Labs will involve fieldwork, data collection and workshops such as sound analysis and geographic tracking. BIO 430 will be taught concurrently with BIO 530. **Prerequisite(s):** BIO 250/BIO 250L. *Credit may not be earned in both BIO 430 and BIO 530.*

BIO 432. Light Microscopy

Cross listed with: BIO 532

Credits 4.00 PeopleSoft Course ID 012450 Grading Basis GRD

This course covers the principles behind light microscopy, from the properties of light to the latest technologies in microscopy. Students will get hands-on experience with the different kinds of microscopes, including the confocal microscope. The course also covers fluorescent probes, advanced fluorescence techniques, digital imaging, methods of quantification and figure preparation for publication, with an emphasis on biological applications. **Prerequisite(s):** BIO 240/BIO 240L.

BIO 443. Understanding Techniques in Neuroscience

Cross listed with: BIO 543

Credits 3.00 PeopleSoft Course ID 014174 Grading Basis GRD

A writing-intensive introduction to basic neurobiological processes that draws from molecular biology, genetics, biochemistry, behavioral biology, electrophysiology, pharmacology, computer science and optics. Topics will

include both classic and state-of-the-art techniques. Special emphasis will be placed on framing techniques as tools to answer basic scientific questions in neuroscience. BIO 443 is taught concurrently with BIO 543. Credit may not be earned in both BIO 443 and BIO 543. **Prerequisite(s):** BIO 240 or BIO 250 or equivalent. *Credit may not be earned in both BIO 443 and BIO 543.*

BIO 444. Virology

Credits 3.00 PeopleSoft Course ID 003253 Grading Basis GRD

A study of the fundamental aspects of both basic and medical virology. Credit may not be earned in both BIO 444 and BIO 544. **Prerequisite(s):** Minimum grade of "C" in each of the following: CHEM 241, BIO 304 and BIO 240/BIO 240L.

BIO 445. Neurobiology

Credits 4.00 PeopleSoft Course ID 010909 Grading Basis GRD

Molecular, cellular and network mechanisms underlying behavior will be studied using problem-solving, discussion, lecture and critical reading of the primary literature. Similarities and differences between nervous systems and computers will be explored. Laboratories will utilize contemporary electrophysiology and computer simulation to examine the neurobiology of simple animal model systems. **Prerequisite(s):** BIO 140/BIO 140L or BIO 304.

BIO 446. Experimental Neurobiology

Credits 4.00 PeopleSoft Course ID 013745 Grading Basis GRD

The experimental basis of neurobiology will be explored in invertebrates and humans using modern neurobiological techniques, such extracellular, intracellular, electromyogram and voltage clamp recording. The course will revolve primarily around the laboratory activities, with the single lecture section designed to support the laboratory. Students will be expected to complete a project that involves developing a new experimental approach or model system. **Prerequisite(s):** BIO 140/BIO 140L or BIO 304.

BIO 447. Evolution and Ecology of Infectious Disease

Cross listed with: BIO 547

Credits 3.00 PeopleSoft Course ID 013535 Grading Basis GRD

An introduction to the evolution and ecology of pathogenic microorganisms, with an emphasis on the bacteria. Emphasis will be placed on the study, discussion, and critique of scientific literature, as well as formal presentation of scientific information and data. **Prerequisite(s):** BIO 245/BIO 245L and BIO 250/BIO 250L.

BIO 448. Developmental Neurobiology

Credits 3.00 PeopleSoft Course ID 013958 Grading Basis GRD

Exploration of molecular and cellular mechanisms that determine neuronal identity, migration, synaptogenesis, synaptic plasticity and neural systems organization. Critical and intensive evaluation and communication of primary literature. **Prerequisite(s):** BIO 240/BIO 240L or BIO 250/BIO 250L.

BIO 448L. Developmental Neurobiology Laboratory

Credits 1.00 PeopleSoft Course ID 014334 Grading Basis GRD

Laboratory projects exploring molecular and cellular mechanisms of neural development, including neuronal identity, migration, synaptogenesis, synaptic plasticity or neural systems organization. Introduction to current research techniques in developmental neurobiology. Independent design and execution of research projects under instructor guidance. **Prerequisite(s):** BIO 240/BIO 240L or BIO 250/BIO 250L.

BIO 449. Insect Ecology

Credits 4.00 PeopleSoft Course ID 013655

An overview of insect ecology from an evolutionary perspective, focusing on the processes that affect the diversity, distribution, and abundance of insects in natural and managed ecosystems. The role of insects as model systems in

understanding ecological and evolutionary principles is included, and current literature in the field is highlighted. Field surveys and experiments are emphasized, including general insect collection and identification.

Prerequisite(s): *BIO 250/BIO 250L.*

BIO 451. Current Topics in Human Development and Evolution

Cross listed with: *BIO 551*

Credits 3.00 PeopleSoft Course ID 008729 Grading Basis GRD

Discussion-based course on the developmental changes involved in our evolution from ape-like ancestors; using the science of cloning and embryonic stem cells to prolong human life; the evolutionary theory of aging; the genetic conflict theory of human pregnancy; the developmental basis of variation in human sexuality; and the direct effects of environment on modern human development and evolution. **Prerequisite(s):** *BIO 240/BIO 240L or equivalent.*

BIO 452. Population Ecology

Credits 4.00 PeopleSoft Course ID 004928 Grading Basis GRD

Theoretical and applied aspects of distribution and abundance, population regulation, interactions between populations and conservation will be studied in selected organisms, including humans. Credit may not be earned in both BIO 452 and BIO 552. **Prerequisite(s):** *BIO 250/BIO 250L.*

BIO 453. Microbial Ecology and Evolution

Credits 3.00 PeopleSoft Course ID 009285 Grading Basis GRD

The ecology of microorganisms will be covered, including those important in human health and in natural environments. Emphasis will be placed on the study and critique of scientific literature. Credit may not be earned in both BIO 453 and 553. **Prerequisite(s):** *BIO 245/BIO 245L and BIO 250/BIO 250L.*

BIO 454. Introduction to Biometrics

Cross listed with: *MATH 354*

Credits 4.00 PeopleSoft Course ID 009895 Grading Basis GRD

This course discusses the role of statistics in biological research and interpretation of biological phenomena. The course will cover topics of sampling, correlation, regression analysis, tests of hypotheses, commonly observed distributions in natural populations, nonparametric tests, goodness-of-fit tests and ANOVA. In order to fully comprehend the statistical analysis of those publications, students will review approximately half a dozen publications from different fields of biology. **Prerequisite(s):** *MATH 220, MATH 229, MATH 318 or equivalent.*

BIO 455. Plant Physiology

Cross listed with: *BIO 555*

Credits 4.00 PeopleSoft Course ID 005842 Grading Basis GRD

An in-depth study of plant function including metabolism, water relations, transport phenomena, growth and development, physiological ecology, and responses to pathogens and abiotic stress. Credit may not be earned in both BIO 455 and BIO 555. **Prerequisite(s):** *BIO 240/BIO 240L and CHEM 132.*

BIO 457. Biological Applications of Geographic Information Systems

Credits 4.00 PeopleSoft Course ID 012216 Grading Basis GRD

This course will explore the various ways that geographic information systems (GIS) can be used to answer biological questions. Students will use GIS software to study applications in ecology, conservation biology and environmental biology. No prior GIS experience is required. **Prerequisite(s):** *BIO 150/BIO 150L or BIO 250/BIO 250L.*

BIO 459. Freshwater Ecology

Credits 4.00 PeopleSoft Course ID 002037 Grading Basis GRD

Functional relationships and productivity of freshwater communities are examined as they are affected by their physical, chemical and biotic environment. Organisms inhabiting lakes, ponds, rivers, streams and estuaries

are studied at the population, community and ecosystem levels. Credit may not be earned in both BIO 459 and BIO 559. **Prerequisite(s):** *BIO 250/BIO 250L and CHEM 132.*

BIO 460. Plant Biotechnology

Cross listed with: *BIO 560*

Credits 4.00 PeopleSoft Course ID 002638 Grading Basis GRD

Theory and practice of growing isolated plant cells, tissues and organs. Credit may not be earned in both BIO 460 and BIO 560. **Prerequisite(s):** *BIO 150/BIO 150L and CHEM 132.*

BIO 467. Human Cardiovascular Physiology

Credits 3.00 PeopleSoft Course ID 014095 Grading Basis GRD

An in-depth look at the human cardiovascular system by means of advanced physiology with clinical applications and case-based learning. While the course is focused on the human heart and blood vessels, other body systems will be discussed in the context of their association and integration with the cardiovascular system. **Prerequisite(s):** *BIO 370 or minimum grade of "B-" in BIO 270/BIO 270L.*

BIO 468. Endocrinology

Credits 3.00 PeopleSoft Course ID 013959 Grading Basis GRD

Study of endocrine organs and mechanisms of action of hormones. Students will be involved in interactive lectures and team-based learning activities to understand endocrine functions and disorders. **Prerequisite(s):** *BIO 240/BIO 240L or BIO 270/BIO 270L.*

BIO 469. Biological Illustration

Credits 3.00 PeopleSoft Course ID 014614 Grading Basis GRD

Students will consider how the skills of visual art are used in the dissemination of data. Students will learn how to sketch, paint and digitally illustrate microscopic specimens, live and dead plants and animals, bones, cellular processes, and scientific methodology. Students will be instructed in different illustration techniques and be encouraged to find their preferred medium to produce a portfolio of images. The course content can be modified to reflect the interests/needs of the students. Students are responsible for obtaining all materials required for completing exercises and projects. Students may also obtain their own biological subjects. **Prerequisite(s):** *BIO 250 and BIO 250L.*

BIO 472. Human Metabolism

Credits 3.00 PeopleSoft Course ID 011908 Grading Basis GRD

This course will focus on the cellular physiological mechanisms responsible for regulation of normal human metabolism and place them in the context of the development of chronic disease processes. **Prerequisite(s):** *CHEM 241 and BIO 240/BIO 240L or permission of the instructor.*

BIO 474. Reproductive Physiology

Credits 3.00 PeopleSoft Course ID 014597 Grading Basis GRD

This is an advanced-level vertebrate physiology course in which students will learn reproductive anatomy, physiology, development and behavior of a variety of organisms with humans serving as the foundational species. Innate and manipulated physiological mechanisms controlling reproduction will be examined at the molecular through organismal levels. Intended for students in organismal biology and health-related fields. **Prerequisite(s):** *BIO 370 or both BIO 270 and BIO 290.*

BIO 477. The Genetics of Cancer

Cross listed with: *BIO 577*

Credits 3.00 PeopleSoft Course ID 013536 Grading Basis GRD

Exploration of the genetic and epigenetic factors that drive the evolution of cancer cells, taking into account both inherited and environmental contributions to this process. The cellular mechanisms debilitated or subverted during cancer

development will be studied, and student teams will demonstrate their understanding of the material through the diagnosis, genetic characterization and treatment of a hypothetical cancer patient. **Prerequisite(s):** BIO 240/BIO 240L.

BIO 478. Aging and Neurodegeneration

Credits 3.00 PeopleSoft Course ID 014518 Grading Basis GRD

This course will examine cellular mechanisms, genetics and environmental factors that underlie the onset and progression of age-related neurodegenerative diseases such as Alzheimer's, Parkinson's, Huntington's and Amyotrophic lateral sclerosis (ALS). This course will build on students' foundational knowledge of cell function, apoptosis and genetics to understand mechanisms that initiate and drive the proliferation neuronal cell death in age-related neurodegenerative diseases. In this course, students also study advancements in research and technology that have led to improved diagnosis and treatment of neurodegenerative disease. **Prerequisite(s):** BIO 240/BIO 240L, and BIO 301 or BIO 370 or BIO 385/PSYC 385.

BIO 480. Advanced Molecular Biology

Credits 3.00 PeopleSoft Course ID 002299 Grading Basis GRD

This course is a study of the history, basic principles and ethical considerations in the field of molecular biology. Students will learn about the structure and function of nucleic acids, proteins and other cellular macromolecules to appreciate the power and limitations of current resources and knowledge.

Prerequisite(s): CHEM 241 and a C- or better in BIO 240/BIO 240L.

BIO 480L. Advanced Molecular Biology Lab

Credits 1.00 PeopleSoft Course ID 014520 Grading Basis GRD

This course is a study of the applied practices in the field of molecular biology. Students will participate in hands-on wet bench and computational experiments analyzing nucleic acids, proteins and other cellular macromolecules to appreciate the power and limitations of current resources and knowledge.

Prerequisite(s): BIO 480 and CHEM 241 and a "C-" or better in BIO 240/BIO 240L. **Corequisite(s):** BIO 480.

BIO 481. Genomics

Cross listed with: Dual level with BIO 581

Credits 4.00 PeopleSoft Course ID 012065 Grading Basis GRD

An advanced biology course designed for students to learn about the structure and function of genomes, to develop facility in web-based tools and resources, and to appreciate the power and limitations of current resources and knowledge. Focus is on the biological questions that genomics can help to answer. Laboratory exercises will be sequencing and analyzing genomic DNA.

Prerequisite(s): BIO 240/BIO 240L.

BIO 482. Human Histology

Credits 4.00 PeopleSoft Course ID 011432 Grading Basis GRD

Students will examine microscopic structure of cells, tissues and major organ systems of the body. Basic anatomical and physiological function is presented to emphasize the histological significance of the examined organ systems.

Prerequisite(s): BIO 260, BIO 270/BIO 270L, BIO 290/BIO 290L, or BIO 370. *Credit may not be earned in both BIO 482 and BIO 582.*

BIO 483. Bioinformatics

Cross listed with: BIO 583

Credits 4.00 PeopleSoft Course ID 013537 Grading Basis GRD

Focuses on building databases and computer programs to manage and analyze biological sequence data, and secondarily on theoretical aspects. The overall objective is to learn current information about the intersection of information science and biology, to develop facility in the many web-based tools and resources for further studies and research in genomics/bioinformatics, and to

appreciate the power and limitations of current resources and knowledge.

Prerequisite(s): BIO 240/BIO 240L.

BIO 484. Aquatic Microbiology

Cross listed with: BIO 584

Credits 3.00 PeopleSoft Course ID 014169 Grading Basis GRD

This research-embedded course will introduce students to the techniques and experimental design currently used in aquatic microbial ecology through both literature and laboratory procedures. Students will participate in projects that are currently a component of the instructor's research program. BIO 484 will be taught concurrently with BIO 584. **Prerequisite(s):** BIO 245/BIO 245L or equivalent. *Students may not earn credit in both BIO 484 and BIO 584.*

BIO 486. Systematics of Vascular Plants

Credits 4.00 PeopleSoft Course ID 001222 Grading Basis GRD

Study of systematic theory and an overview of the classification and evolution of higher plants with particular attention to flowering plant families. Techniques for plant identification and collection and for construction of phylogenies will be taught in lab. **Prerequisite(s):** BIO 150/BIO 150L or BIO 250/BIO 250L.

BIO 489. Topics in Science Pedagogical Content Knowledge

Cross listed with: MSSE 495.

Credits 2.00 PeopleSoft Course ID 014134 Grading Basis GRD

Contributes to the further development of pre-service secondary science teachers' pedagogical content knowledge. Students will engage in education research to gain experience and develop instructional practices relevant to the Virginia Standards of Learning. To supplement their understanding of scientific concepts and the process of science, the focus will be on the nature of science encompassing literature from the history, philosophy, and sociology of science. **Prerequisite(s):** BIO 150/BIO 150L.

BIO 490. Mechanics of Animal Movement

Cross listed with: BIO 590

Credits 4.00 PeopleSoft Course ID 004258 Grading Basis GRD

The interactions of organisms with their physical environment. Concepts from fluid and solid mechanics are applied to biological form and function.

Prerequisite(s): BIO 150/BIO 150L or permission of the instructor.

BIO 491. Scientific Writing, Presentation and Critical Thinking

Credits 2.00 PeopleSoft Course ID 014051 Grading Basis CNC

A discussion-based course for the development of the fundamental thinking, writing and presentation skills necessary to be a successful researcher. This course is required (as BIO 491H) for all Biology Track I and II Honors students in their sophomore year, and is strongly recommended for all Biology majors who are intending to do research. Offered as credit/no credit only.

Prerequisite(s): BIO 140/BIO 140L or by permission of the instructor.

BIO 492. Mentored Biology Course Assistant

Credits 1.00 PeopleSoft Course ID 012988 Grading Basis CNC

Students are trained in the support and function of undergraduate biology courses. Students must contact and make arrangements with the supervising instructor in the term prior to registration. May be repeated when course content and/or student responsibilities within the course change. Offered as credit/no credit only. **Prerequisite(s):** GPA of 2.5 or higher and permission of the instructor.

BIO 493. Pre-Veterinary Student Internship

Credits 2.00 PeopleSoft Course ID 012989 Grading Basis CNC

Students are supervised by veterinarians and lab technicians in diagnostic lab activities at a regional animal health laboratory. A proposal and final presentation are required. Enrollment is limited to 1-2 individuals per term and students are advised to contact the Pre-Veterinary coordinator to be waitlisted.

Offered as credit/no credit only. **Prerequisite(s):** *Completion of BIO 240/BIO 240L, GPA of 2.5 or higher and permission of the instructor.*

BIO 494. Internship in Biology

Credits 1.00 - 2.00 **PeopleSoft Course ID** 006958 **Grading Basis** CNC

Students participate in research or applied biology outside of this university. Students must contact and obtain approval of a supervising instructor at the off campus location and with the department internship coordinator in the term prior to registration. A proposal must be approved prior to registration and a final paper or presentation will be completed. Offered as credit/no credit only.

Prerequisite(s): *Biology or biotechnology major with a minimum of eight biology credit hours and a GPA of 2.5 or greater.*

BIO 495. Biotechniques

Credits 1.00 **PeopleSoft Course ID** 010359 **Grading Basis** CNC

Students are trained in research theory and techniques. Students must contact and make arrangements with a supervising instructor in the term prior to registration. May be repeated when course content changes. Offered as credit/no-credit only. **Prerequisite(s):** *GPA of 2.5 or greater.*

BIO 496. Literature Research

Credits 1.00 **PeopleSoft Course ID** 008441 **Grading Basis** CNC

Students pursue literature research in a selected area of biology. Students must contact and make arrangements with a supervising instructor in the term prior to registration. May be repeated when course content changes. Offered as credit/no-credit only. **Prerequisite(s):** *GPA of 2.5 or greater.*

BIO 497. Biological Research

Credits 1.00 **PeopleSoft Course ID** 009519 **Grading Basis** GRD

Students pursue a lab or field research project in a selected area of biology. For new projects (497A), students must contact and make arrangements with a supervising instructor in the term prior to registration and complete a 2-3 page proposal no later than five weeks after the start of the course. Course may be repeated as BIO 497B with the same instructor, or as BIO 497A with a different instructor. Offered as credit/no credit only. **Prerequisite(s):** *GPA of 2.5 or greater.*

BIO 499A. Senior Project

Credits 2.00 **PeopleSoft Course ID** 004912 **Grading Basis** GRD

Three semester courses taken as Parts A, B and C; 2 credits each. Expectations, requirements and prerequisites are defined in the department senior project policy. Students must contact and make arrangements with a supervising instructor in the term prior to registration.

BIO 499B. Senior Project

Credits 2.00 **PeopleSoft Course ID** 010146 **Grading Basis** GRD

Three semester courses taken as Parts A, B and C; 2 credits each. Expectations, requirements and prerequisites are defined in the department senior project policy. Students must contact and make arrangements with a supervising instructor in the term prior to registration.

BIO 499C. Senior Project

Credits 2.00 **PeopleSoft Course ID** 006845 **Grading Basis** GRD

Three semester courses taken as Parts A, B and C; 2 credits each. Expectations, requirements and prerequisites are defined in the department senior project policy. Students must contact and make arrangements with a supervising instructor in the term prior to registration.

Biotechnology

BIOT 260. Biotechnology Seminar

Credits 1.00 **PeopleSoft Course ID** 011514 **Grading Basis** GRD

An introduction to biotechnology. Topics will include research opportunities, careers and current topics in biotechnology. Not available for biology major or minor credit.

BIOT 494. Internship in Biotechnology

Credits 1.00-2.00 **PeopleSoft Course ID** 014050 **Grading Basis** GRD

Students participate in research or applied biotechnology outside of the university. A proposal must be approved by the biotechnology program's internship coordinator or director prior to registration. A final deliverable, in a format deemed appropriate for the learning experience, will be submitted at the conclusion of the course. **Prerequisite(s):** *Biotechnology major with a minimum of eight credit hours and a GPA of 2.5 or higher with instructor permission.*

BIOT 495. Techniques in Biotechnology

Credits 1.00 **PeopleSoft Course ID** 014557 **Grading Basis** CNC *Repeatable up to a maximum of six credit hours. Requires permission of supervising instructor and GPA \geq 2.5.*

This course is designed to allow students to participate in a mentored research project with a Biotechnology faculty member. Students are trained in research theory and techniques related to biotechnology research. Students must contact a mentor who will supervise them in the course. **Prerequisite(s):** *Instructor permission.*

BIOT 496. Biotechnology Literature Research

Credits 1.00 **PeopleSoft Course ID** 014558 **Grading Basis** CNC *Repeatable up to a maximum of six credit hours. Requires permission of supervising instructor and GPA \geq 2.5.*

This course is designed to allow students to participate in a mentored research project with a Biotechnology faculty member. Students pursue literature research in a selected area of biotechnology. Students must contact a mentor who will supervise them in the course. **Prerequisite(s):** *Instructor permission.*

BIOT 497. Research in Biotechnology

Credits 1.00 **PeopleSoft Course ID** 014559 **Grading Basis** CNC *Repeatable up to a maximum of six credit hours. Requires permission of supervising instructor and GPA \geq 2.5.*

This course is designed to allow students to participate in a mentored research project with a Biotechnology faculty member. Students pursue a lab or field research project in a selected area of biotechnology. Students must write a 2-3 page proposal, approved no later than five weeks after the start of the course. For successful completion of BIOT 497, a professional presentation is required before graduation. **Prerequisite(s):** *Instructor permission.*

BIOT 499A. Honors Capstone Project

Credits 1.00 **PeopleSoft Course ID** 014560 **Grading Basis** CNC

This course is designed to allow students to participate in a mentored research project with a Biotechnology faculty member as part of the Honors program. Three semester courses taken as Parts A, B, and C: 1, 2, and 3 credits each, respectively. Expectations, requirements and prerequisites are defined by the honors program. Students must contact and make arrangements with a supervising instructor in the term prior to registration. Requirements are set by the Honors College. **Prerequisite(s):** *Instructor permission.*

BIOT 499B. Honors Capstone Project

Credits 2.00 **PeopleSoft Course ID** 014561 **Grading Basis** CNC

This course is designed to allow students to participate in a mentored research project with a Biotechnology faculty member as part of the Honors program. Three semester courses taken as Parts A, B, and C: 1, 2, and 3 credits each, respectively. Expectations, requirements and prerequisites are defined by the honors program. Students must contact and make arrangements with a

supervising instructor in the term prior to registration. Requirements are set by the Honors College. **Prerequisite(s):** *Instructor permission.*

BIOT 499C. Honors Capstone Project

Credits 3.00 PeopleSoft Course ID 014562 Grading Basis CNC

This course is designed to allow students to participate in a mentored research project with a Biotechnology faculty member as part of the Honors program. Three semester courses taken as Parts A, B, and C: 1, 2, and 3 credits each, respectively. Expectations, requirements and prerequisites are defined by the honors program. Students must contact and make arrangements with a supervising instructor in the term prior to registration. Requirements are set by the Honors College. **Prerequisite(s):** *Instructor permission.*

Business

BUS 160. Business Decision Making in a Modern Society [C1CT]

Credits 3.00 PeopleSoft Course ID 004857 Grading Basis GRD

This course introduces the concepts of basic technology literacy, information retrieval via electronic and hard copy; along with critical thinking skills. Basic business principles will be introduced to reinforce these concepts and their relationships. The course provides opportunity for applying the skills of oral and written communication to a variety of learning activities. **Prerequisite(s):** *Students who have earned credit for a Critical Thinking course must receive permission to enroll in an additional Critical Thinking course. You may not take BUS 160 if you have completed COB 300.*

BUS 200. Personal Finance

Credits 3.00 PeopleSoft Course ID 014208 Grading Basis GRD

This course covers the fundamentals of personal finance, enabling the student to make better financial decisions both as a student and upon graduation. This course is not part of the finance major requirements and will not be considered a FIN elective. **Prerequisite(s):** *ECON 200 and either MATH 155, MATH 205, MATH 231 or MATH 235.*

Business Analytics

BSAN 390. Statistical Modeling for Business Analytics

Credits 3.00 PeopleSoft Course ID 013293 Grading Basis GRD

This course integrates data analytics with advanced analytical methods from statistics using computer applications. The emphasis is on applying statistical modeling and analysis of data from a variety of business processes to support managerial decision-making and improved predictive capabilities.

Prerequisite(s): *Declared BSAN minor or Declared BSAN concentration in CIS major, COB 291 or equivalent with a grade of "B-" or higher, and junior or senior standing.*

BSAN 391. Decision Modeling for Business Analytics

Credits 3.00 PeopleSoft Course ID 013236 Grading Basis GRD

This course addresses a wide range of complex business decision problems through quantitative modeling using management science techniques with appropriate computer applications. Approaches include optimization and sensitivity analysis, multi-objective decision making and simulation risk analysis. **Prerequisite(s):** *Declared BSAN minor or declared BSAN concentration in CIS major, and BSAN 390 with a grade of "C" or better.*

BSAN 393. Data Mining for Business Analytics

Cross listed with: *CIS 393*

Credits 3.00 PeopleSoft Course ID 013222 Grading Basis GRD

This course focuses on using statistical and machine learning techniques in computer applications that allow the extraction of useful, previously unrecognized information from large data sets for predictive purposes. By effectively sifting through databases such as those generated by many

businesses, data mining allows the analyst to recognize potentially important patterns and clusters and to target business opportunities. **Prerequisite(s):** *Declared BSAN minor or declared BSAN concentration in CIS major, BSAN 390 and BSAN 391.*

BSAN 490. Special Studies in Computer Information Systems or Business Analytics

Cross listed with: *CIS 490*

Credits 1.00 - 3.00 PeopleSoft Course ID 000954 Grading Basis GRD

An advanced course in information and/or business analytics designed to give qualified students an opportunity to complete independent study under faculty supervision. **Prerequisite(s):** *Senior standing, recommendation of the instructor and written approval of the department head prior to registration.*

BSAN 498. Special Topics in Business Analytics

Credits 3.00 PeopleSoft Course ID 013238 Grading Basis GRD

An advanced course designed to allow exploration of current topics in business analytics. Course content will vary. See adviser for current content.

Prerequisite(s): *Permission of the instructor.*

Business Law

BLAW 360. Legal Analysis and Business Persuasion

Credits 3.00 PeopleSoft Course ID 014218 Grading Basis GRD

This course addresses the principles of professional argumentation and writing in the context of the business world and the legal services industry. First, students research and write an analytical legal memorandum. Second, students research and prepare a persuasive business proposal that advocates for one business acquisition over other potential targets. Finally, students learn important day-to-day professional analytical and drafting skills. **Prerequisite(s):** *COB 300*

BLAW 470. Financial Products: Regulation and Protection

Credits 3.00 PeopleSoft Course ID 010167 Grading Basis GRD

An inquiry into the legal environment of the financial marketplace. Topics explored include the role of regulatory agencies, the design of contracts which minimize credit risk and maximize marketability, and methods of protecting the proprietary component of innovative financial products. **Prerequisite(s):** *COB 318 and junior standing.*

BLAW 480. Estate Planning

Credits 3.00 PeopleSoft Course ID 014077 Grading Basis GRD

Legal, financial and practical considerations in the creation, management and conservation of an estate. Includes trust principles and practices; various estate planning tools, including wills, trusts, life insurance and powers of appointment; and pertinent income, estate and gift provisions. **Prerequisite(s):** *COB 300 and COB 318. Corequisite(s):* *COB 300 and COB 318*

BLAW 494. White Collar Crime

Credits 3.00 PeopleSoft Course ID 012687 Grading Basis GRD

A study of white collar crime in America, a unique type of criminal activity that primarily affects businesses. The course explores the substance of white collar crime and focuses on the unique elements of various crimes through the study of actual cases. The course also examines how white collar crimes are prosecuted and defended in state and federal courts. Students are introduced to federal and state criminal procedure, substantive defenses, and the use of sentencing guidelines. **Prerequisite(s):** *COB 300.*

BLAW 495. Contract Law, Sales and Secured Transactions

Credits 3.00 PeopleSoft Course ID 001916 Grading Basis GRD

A study of the law of contracts, Article Two of the Uniform Commercial Code, product liability, legal liability of accountants, secured transactions and bankruptcy with emphasis on the role these play in professional and personal

decision making. The courts, the legislature and the interaction of these two branches of government in responding to a changing society are studied throughout. **Prerequisite(s):** COB 318 and COB 300.

BLAW 496. The Law of Business Organizations, Negotiable Property Instruments and Property

Credits 3.00 PeopleSoft Course ID 000223 Grading Basis GRD

A study of Article Three of the Uniform Commercial Code, agency, partnerships, corporations, securities regulations, real property, trusts and decedents estates with emphasis on the role these play in professional and personal decision making. **Prerequisite(s):** COB 318 and COB 300 or permission of the instructor.

BLAW 497. Legal Aspects of International Business

Credits 3.00 PeopleSoft Course ID 000685 Grading Basis GRD

Survey of legal implications of international business dealings including foreign direct sales, distributorship arrangements, licensing of technology and legal aspects of the multi-national corporation. The foreign legal environment, relevant conventions and trade regulations, and the transnational reach of regulatory law will be considered. **Prerequisite(s):** COB 318 and senior standing.

BLAW 498. Special Topics in Business Law

Credits 3.00 PeopleSoft Course ID 012735

This course is designed to allow explorations of areas of current topics in business law. Course content will vary by semester and instructor. For current content, consult the adviser. **Prerequisite(s):** COB 300 and permission of the instructor.

Chemistry

CHEM 120. Concepts of Chemistry [C3PP]

Credits 3.00 PeopleSoft Course ID 009878 Grading Basis GRD

A one-semester introduction to the fundamental principles, laws and applications of chemistry. Examples relating to the health sciences are emphasized. Not available for major or minor credit in chemistry. May be used for general education credit.

CHEM 131. General Chemistry I [C3PP]

Credits 3.00 PeopleSoft Course ID 002410 Grading Basis GRD

The first of a two-course general chemistry sequence for science majors. It is designed to introduce students to basic chemical concepts including atomic structure, periodic properties of the elements, nomenclature, basic stoichiometry, theories related to reactivity and bonding and the behavior of materials. May be used for general education credit. **Corequisite(s):** CHEM 131L or CHEM 135L.

CHEM 131L. General Chemistry Laboratory [C3L]

Credits 1.00 PeopleSoft Course ID 008020 Grading Basis GRD

This laboratory course is designed to complement and supplement the CHEM 131 lecture course. The laboratory and lecture portions must be taken concurrently. Chemistry majors take CHEM 135L. May be used for General Education credit. **Corequisite(s):** CHEM 131.

CHEM 132. General Chemistry II

Credits 3.00 PeopleSoft Course ID 009767 Grading Basis GRD

A course designed to examine the mechanisms by which chemists obtain information about reacting systems. Major concepts covered include: chemical reactivity, chemical equilibrium, electrochemistry, thermodynamics and kinetics. **Prerequisite(s):** Grades of "C-" or higher in CHEM 131 and either CHEM 131L or CHEM 135L. **Corequisite(s):** CHEM 132L or CHEM 136L.

CHEM 132L. General Chemistry Laboratory

Credits 1.00 PeopleSoft Course ID 005152

This laboratory course is designed to complement and supplement the CHEM 132 lecture course. The laboratory and lecture portions must be taken concurrently. Chemistry majors take CHEM 136L. **Prerequisite(s):** Grades of "C-" or higher in CHEM 131 and either CHEM 131L or CHEM 135L.

CHEM 135L. Special General Chemistry Laboratory I

Credits 1.00 PeopleSoft Course ID 008525 Grading Basis GRD

An enriched laboratory course designed primarily for chemistry majors. May be used for general education credit. **Corequisite(s):** CHEM 131.

CHEM 136L. Special General Chemistry Laboratory II

Credits 2.00 PeopleSoft Course ID 002593 Grading Basis GRD

An enriched laboratory course that includes special topics and experiments not presented in the regular CHEM 132 laboratory. **Prerequisite(s):** Grades of "C-" or higher in CHEM 131, CHEM 132 and either CHEM 131L or CHEM 135L.

Corequisite(s): CHEM 132

CHEM 241. Organic Chemistry I

Credits 3.00 PeopleSoft Course ID 008244 Grading Basis GRD

The major objective for this course is to teach the modern method of scientific problem solving using organic compounds as models. Emphasis will be on the chemical language (nomenclature and terminology), molecular electronic concepts, and stereochemistry followed by a brief survey of chemical reactions/mechanisms. Functional groups studied include alkyl halides, alcohols, alkenes, alkynes, carbonyl additions, carboxylic acids and their derivatives as well as alpha-carbon chemistry leading to the ability to perform multi-step synthetic problems. Credit cannot be earned in both CHEM 241L and CHEM 242L. **Prerequisite(s):** Grade of "C-" or higher in CHEM 132.

CHEM 241L. Concepts of Organic Chemistry Laboratory

Credits 1.00 PeopleSoft Course ID 000023 Grading Basis GRD

Laboratory work will include training in the techniques of organic chemistry, preparation of compounds and some organic qualitative analysis. Credit cannot be earned in both CHEM 241L and CHEM 242L. **Prerequisite(s):** CHEM 241 and CHEM 132L. **Corequisite(s):** CHEM 241.

CHEM 242. Organic Chemistry II

Credits 3.00 PeopleSoft Course ID 000207 Grading Basis GRD

The major objective for this course is to teach the modern method of scientific problem solving using organic compounds as models. Emphasis will be a more advanced study of chemical reactivity and mechanisms of the functional groups leading to applications in multi-step synthetic problems as well as structure elucidation of organic compounds. **Prerequisite(s):** Grade of "C-" or higher in CHEM 241. It is strongly recommended that students take CHEM 242L with CHEM 242 lecture.

CHEM 242L. Organic Chemistry Laboratory

Credits 2.00 PeopleSoft Course ID 005224 Grading Basis GRD

This course will present laboratory techniques and experiments associated with organic chemistry, including an introduction to synthesis, spectroscopic methods, chromatographic techniques and some qualitative organic analysis. Credit cannot be earned in both CHEM 241L and 242L. **Prerequisite(s):** CHEM 132L and grade of "C-" or higher in CHEM 241. **Corequisite(s):** CHEM 242.

CHEM 260. Concepts of Biochemistry

Credits 3.00 PeopleSoft Course ID 000002 Grading Basis GRD

A brief survey of the principal constituents of living cells, proteins, carbohydrates, lipids and nucleic acids, with emphasis on their synthesis and transformations in vivo. Intermediary metabolism and protein replication will be stressed. Not available for major or minor credit. **Prerequisite(s):** CHEM 241 and either CHEM 241L or CHEM 242L

CHEM 260L. Concepts of Biochemistry Laboratory

Credits 1.00 PeopleSoft Course ID 010216 Grading Basis GRD

The laboratory work will comprise experiments demonstrating some of the pertinent reactions including those of analytical value. **Prerequisite(s):** CHEM 260. **Corequisite(s):** CHEM 260.

CHEM 270. Inorganic Chemistry I**Credits 3.00 PeopleSoft Course ID 006400 Grading Basis GRD**

A survey of the chemistry of the elements and modern theories of bonding. **Prerequisite(s):** Grade of "C-" or higher in CHEM 132.

CHEM 280. An Alternative Lower-Division Chemistry Experience**Credits 1.00 - 4.00 PeopleSoft Course ID 008150 Grading Basis GRD**

This course will provide a mechanism for offering a nontraditional, lower division, lecture and/or laboratory course. It will be offered only with the approval of the full-time teaching faculty. No course will be offered more than three times under the 280 designation. Students may repeat CHEM 280 for credit when course content changes.

CHEM 287L. Integrated Inorganic/Organic Laboratory I**Credits 2.00 PeopleSoft Course ID 008370 Grading Basis GRD**

This course provides an enriched, integrated introduction to the laboratory procedures associated with inorganic and organic chemistry. Topics include apparatus design and construction, synthesis, separation methods, spectroscopic analysis and application of computers in the laboratory.

Prerequisite(s): CHEM 241 and CHEM 132L. **Corequisite(s):** CHEM 241.

CHEM 288L. Integrated Inorganic/Organic Laboratory II**Credits 2.00 PeopleSoft Course ID 001885 Grading Basis GRD**

An enriched, integrated introduction to the laboratory procedures associated with inorganic and organic chemistry. Topics include apparatus design and construction, synthesis, separation methods, spectroscopic analysis and application of computers in the laboratory. **Prerequisite(s):** Grade of "C-" or better in CHEM 241 and CHEM 270 and CHEM 287L. **Corequisite(s):** CHEM 270.

CHEM 315. Instructional Experiences in Chemistry**Credits 1.00 PeopleSoft Course ID 014347 Grading Basis GRD**

Students are trained in the support and function of undergraduate chemistry courses. Students must contact and make arrangements with the supervising instructor in the term prior to registration. May be repeated when course content and/or student responsibilities within the course change.

Prerequisite(s): Permission of instructor.

CHEM 325. Chemical Hazards and Laboratory Safety**Credits 1.00 PeopleSoft Course ID 003936 Grading Basis GRD**

A brief introduction to physical and chemical hazards which may be encountered in a laboratory setting. Methods of personal protection will be emphasized.

CHEM 331. Physical Chemistry I**Credits 3.00 PeopleSoft Course ID 000253 Grading Basis GRD**

A study of thermodynamics, solutions, kinetics and macromolecules with applications of chemical and biological problems. **Prerequisite(s):** CHEM 132, MATH 236 and PHYS 240.

CHEM 336L. Applied Physical Chemistry Laboratory**Credits 2.00 PeopleSoft Course ID 005937 Grading Basis GRD**

A laboratory course which emphasizes the applied experimental aspects of physical chemistry. **Prerequisite(s):** CHEM 331. **Corequisite(s):** CHEM 331.

CHEM 351. Analytical Chemistry**Credits 4.00 PeopleSoft Course ID 010084 Grading Basis GRD**

The total analysis concept is introduced and developed. This framework encompasses the areas of experiment design, sample collection and treatment,

and statistical evaluation of results, as well as standard analysis techniques.

Prerequisite(s): CHEM 132.

CHEM 352. Instrumental Analysis**Credits 3.00 PeopleSoft Course ID 004962 Grading Basis GRD**

This course emphasizes the application of instrumental techniques to the quantitative determination of chemical composition. Both instrument theory and practical applications are presented. **Prerequisite(s):** CHEM 351 and MATH 235.

CHEM 352L. Instrumental Analysis Laboratory**Credits 2.00 PeopleSoft Course ID 001971 Grading Basis GRD**

This course will introduce students to the methodology and technology associated with the design and use of chemical instrumentation. Students perform experiments that illustrate the theoretical principles associated with instrument designs and the application of instruments to the solution of qualitative and quantitative analysis problems. **Corequisite(s):** CHEM 352.

CHEM 353. Environmental Chemistry**Credits 3.00 PeopleSoft Course ID 013476 Grading Basis GRD**

An introduction to chemical pollution of water in the air, soil, groundwater, streams and drinking water from a chemist's perspective. Topics include sources and methods of assessment, fates and reactions, and transport of chemicals in the environment. This course does not include laboratory activities. **Prerequisite(s):** A grade of "C" or better in CHEM 241 or permission of the instructor.

CHEM 354. Environmental Chemistry Field Camp**Credits 3.00 PeopleSoft Course ID 000144 Grading Basis GRD**

Fundamentals of environmental chemistry with laboratory and field trip components. The basic chemical principles of environmental problems are studied. Field trips and laboratory work on real samples are integrated with lecture material. **Prerequisite(s):** CHEM 241 or permission of the instructor.

CHEM 355. Geochemistry of Natural Waters

Cross listed with: GEOL 355

Credits 3.00 PeopleSoft Course ID 009371 Grading Basis GRD

Study of chemical theory and reactions important in natural water systems. The role of atmospheric, geologic and biological inputs in determining the geochemistry of streams, rivers and oceans. **Prerequisite(s):** CHEM 131 and CHEM 132 or equivalent.

CHEM 361. Biochemistry I

Cross listed with: BIO 361

Credits 3.00 PeopleSoft Course ID 000693 Grading Basis GRD

An introduction to the molecules and chemical reactions of living systems. Structure and function of important classes of biomolecules are explored and the relationship of structure to function is stressed. Basic metabolic sequences are discussed. **Prerequisite(s):** Grade of "C-" or higher in CHEM 241 and permission of the instructor. Completion of CHEM 242 is strongly recommended.

CHEM 362. Biochemistry II**Credits 3.00 PeopleSoft Course ID 007413 Grading Basis GRD**

A continuation of CHEM 361 including metabolic regulation, protein biosynthesis, analytical methods and isolation of biomolecules. **Prerequisite(s):** CHEM 361 or permission of the instructor.

CHEM 363. Biophysical Chemistry**Credits 3.00 PeopleSoft Course ID 013408 Grading Basis GRD**

The study of structure-function relationships in biological molecules as well as the theory and applications of biophysical methods used for the analysis of proteins and nucleic acids. Topics may include analytical ultracentrifugation,

light scattering, fluorescence, calorimetry, surface plasmon resonance, single molecule approaches, X-ray diffraction, NMR, TEM, AFM, structure prediction and computational simulations. **Prerequisite(s):** *Grade of "C" or higher in CHEM 361.*

CHEM 366L. Biochemistry Laboratory

Credits 2.00 PeopleSoft Course ID 005875 Grading Basis GRD

An introduction to laboratory techniques and experimental approaches associated with modern biochemistry. Isolation and characterization of enzymes and other biomolecules are emphasized. **Prerequisite(s):** *CHEM 361 and either CHEM 241L or CHEM 242L or CHEM 287L.*

CHEM 367L. Biochemistry Laboratory

Credits 2.00 PeopleSoft Course ID 013409 Grading Basis GRD

An introduction to laboratory techniques and experimental approaches associated with modern biochemistry. Isolation and characterization of proteins is emphasized. **Prerequisite(s):** *Restricted to majors in Chemistry or Biophysical Chemistry, or by permission of the instructor.*

CHEM 368L. Biophysical Chemistry Laboratory

Credits 2.00 PeopleSoft Course ID 013410 Grading Basis GRD

An introduction to experimental approaches used to characterize proteins. Techniques may include NMR, UV-Vis, AFM, circular dichroism and infrared spectroscopy. **Prerequisite(s):** *Restricted to majors in Chemistry or Biophysical Chemistry, or by permission of the instructor.*

CHEM 375. An Introduction to Materials Science

Cross listed with: *MATS 375, PHYS 375*

Credits 3.00 PeopleSoft Course ID 007865 Grading Basis GRD

An introduction to materials science with emphasis on general properties of materials. Topics will include crystal structure, extended and point defects, and mechanical, electrical, thermal and magnetic properties of metals, ceramics, electronic materials, composites and organic materials. **Prerequisite(s):** *CHEM 131 and PHYS 150 or PHYS 250 or ISAT 212 or permission of the instructor.*

CHEM 390. Problems in Chemistry

Credits 1.00-3.00 PeopleSoft Course ID 006763 Grading Basis GRD

Repeatable for a total of 4 credits.

A project is undertaken dealing with some aspect of chemistry under the guidance of a faculty adviser. Repeatable for a total of 4 credits. **Prerequisite(s):** *Permission of instructor.*

CHEM 395. Perspectives in Chemistry

Credits 1.00 PeopleSoft Course ID 006551 Grading Basis OPT

A description of the technical and nontechnical capabilities expected of a university graduate who enters industry, government or academia is presented. The student is introduced to the various laws governing the chemical industry as well as to the fields of toxicology and environmental health. Experts in various disciplines discuss current topics of concern to the chemistry and biology student.

CHEM 432. Physical Chemistry II

Credits 3.00 PeopleSoft Course ID 002564 Grading Basis GRD

A study of atomic and molecular energy levels and structure as interpreted by quantum theory. **Prerequisite(s):** *CHEM 132 and MATH 236 and PHYS 250.*

CHEM 438L. Physical Chemistry Laboratory

Credits 2.00 PeopleSoft Course ID 007408 Grading Basis GRD

A laboratory course which emphasizes the application of various physical measurement techniques as a means of obtaining data to test fundamental chemical theory. **Corequisite(s):** *CHEM 432.*

CHEM 440. Intermediate Organic Chemistry

Credits 3.00 PeopleSoft Course ID 003317 Grading Basis GRD

An advanced study of the theory of organic chemistry as applied to chemical reactions and synthetic methods. Such topics as reaction mechanisms, spectroscopy and stereochemistry will be included. **Prerequisite(s):** *CHEM 242.*

CHEM 445. Polymer Chemistry

Credits 3.00 PeopleSoft Course ID 003155 Grading Basis GRD

A study of the synthesis and characterization of macromolecules. Polymer chemistry is discussed in a manner that focuses most attention on the properties of macromolecules that can be understood at the molecular level.

Prerequisite(s): *CHEM 242*

CHEM 445L. Polymer Chem Lab

Credits 1.00 PeopleSoft Course ID 002292 Grading Basis GRD

A laboratory course focused on the synthesis and characterization of macromolecules. The experiments focus most on the properties of macromolecules so the materials can be understood at the molecular level.

Prerequisite(s): *CHEM 242. Corequisite(s):* *CHEM 445.*

CHEM 450. Nuclear and Radiation Chemistry

Credits 3.00 PeopleSoft Course ID 008043 Grading Basis GRD

A study of the fundamentals of radioactivity in chemistry. Topics include the effects of radiation on matter, measurement of radiation, activation analysis, tracer studies and the nuclear fuel cycle. Applications of radioactive materials and radiation in industry and medicine will be described.

Prerequisite(s): *CHEM 132 and PHYS 250 or permission of the instructor.*

CHEM 450L. Laboratory for Nuclear and Radiation Chemistry

Credits 1.00 PeopleSoft Course ID 005145 Grading Basis GRD

A laboratory course designed to demonstrate the topics covered in CHEM 450.

Prerequisite(s): *CHEM 132 and PHYS 250 or permission of the instructor.*

Corequisite(s): *CHEM 450.*

CHEM 455. Lasers and Their Applications to Physical Sciences

Cross listed with: *PHYS 455*

Credits 3.00 PeopleSoft Course ID 002624 Grading Basis GRD

An introduction to both the theoretical and practical aspects of lasers and their applications in the physical sciences. **Prerequisite(s):** *PHYS 270/PHYS 270L, CHEM 331 or permission of the instructor.*

CHEM 470. Inorganic Chemistry II

Credits 3.00 PeopleSoft Course ID 003713 Grading Basis GRD

A study of selected topics in the field of advanced inorganic chemistry. **Prerequisite(s):** *A grade of "C-" or higher in CHEM 270 and CHEM 331.* **Corequisite(s):** *CHEM 331.*

CHEM 480. Selected Topics in Chemistry

Credits 1.00 - 4.00 PeopleSoft Course ID 008984 Grading Basis GRD

This course is designed to allow an in-depth study of specific topics in chemistry selected according to student and faculty interests.

CHEM 481. Literature and Seminar I

Credits 1.00 PeopleSoft Course ID 008431 Grading Basis GRD

Provides instruction in methods of abstracting specific information from the body of chemical literature. Attendance at regularly scheduled department seminars is required. **Prerequisite(s):** *CHEM 242 or CHEM 288L.*

CHEM 482. Literature and Seminar II

Credits 1.00 PeopleSoft Course ID 008144 Grading Basis GRD

Provides practice in preparing and presenting a literature-based seminar and paper on a chemical topic. Attendance at regularly scheduled department seminars is required. **Prerequisite(s):** *CHEM 481 or permission of the instructor.*

CHEM 485. Science of the Small

Cross listed with: *PHYS 485*

Credits 4.00 PeopleSoft Course ID 013693 Grading Basis GRD

The chemistry and physics of materials of the nanometer scale will be explored. Lectures and laboratories will cover contemporary issues in surfaces, self-assembly and low dimensional materials. The intersection of biology, chemistry, engineering and physics will be explored through nanoscience.

Prerequisite(s): CHEM 132 and MATH 236; and PHYS 150 or PHYS 250.

Corequisite(s): PHYS 150 or PHYS 250.

CHEM 494. Internship in Chemistry**Credits 1.00 - 2.00 PeopleSoft Course ID 003706 Grading Basis GRD**

Students participate in research or applied chemistry outside of the university. A proposal must be approved prior to registration, and a final paper will be completed

CHEM 497. Undergraduate Chemical Research**Credits 1.00 - 3.00 PeopleSoft Course ID 005076 Grading Basis GRD**

Research in a selected area of chemistry, as arranged with and approved by a faculty research adviser the semester prior to registration. Repeatable up to a total of six credits **Prerequisite(s):** Permission of instructor.

CHEM 499A. Honors**Credits 1.00 PeopleSoft Course ID 009444 Grading Basis GRD****CHEM 499B. Honors****Credits 2.00 PeopleSoft Course ID 008715 Grading Basis GRD****CHEM 499C. Honors****Credits 3.00 PeopleSoft Course ID 003954 Grading Basis GRD**

Chinese

CHIN 101. Elementary Chinese I**Credits 3.00 - 4.00 PeopleSoft Course ID 003384 Grading Basis OPT**

The fundamentals of Mandarin Chinese through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory.

CHIN 102. Elementary Chinese II**Credits 3.00 - 4.00 PeopleSoft Course ID 001109 Grading Basis GRD**

The fundamentals of Mandarin Chinese through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. If student has had two or more years of the language in high school he/she will not receive credit for the course. **Prerequisite(s):** CHIN 101.

CHIN 212. Intensive Chinese II**Credits 6.00 PeopleSoft Course ID 012925 Grading Basis GRD**

The fundamentals of Chinese through intensive listening, speaking, reading and writing at the intermediate level. This four-week course is the equivalent of CHIN 231-232. **Prerequisite(s):** CHIN 102 or CHIN 111 or permission of the instructor.

CHIN 231. Intermediate Chinese I**Credits 3.00 PeopleSoft Course ID 008145 Grading Basis GRD**

A more in-depth study of grammar, vocabulary building, conversation and reading. Includes an introduction to composition. **Prerequisite(s):** CHIN 102, CHIN 111, or permission of the instructor.

CHIN 232. Intermediate Chinese II**Credits 3.00 PeopleSoft Course ID 003358 Grading Basis GRD**

A thorough review of grammar, vocabulary building, conversation, composition and reading. **Prerequisite(s):** CHIN 231 or permission of the instructor.

CHIN 300. Chinese Grammar and Communication**Credits 3.00 PeopleSoft Course ID 011754 Grading Basis GRD**

Intensive training in grammatical structures and their applications to oral and written conversation. Instruction is in Chinese. **Prerequisite(s):** CHIN 232 or CHIN 212 or permission of the instructor.

CHIN 320. Chinese Oral and Written Communication**Credits 3.00 PeopleSoft Course ID 011753 Grading Basis GRD**

Intensive training in the use of modern, everyday Chinese with emphasis on conversation and composition. Readings in Chinese will provide a context for discussion and writing. **Prerequisite(s):** CHIN 300 or permission of the instructor.

CHIN 375. Business and Society in China**Credits 3.00 PeopleSoft Course ID 014588 Grading Basis GRD**

The course is an introduction to business and society in China, the world's second largest economy. The course explores the development of Chinese society in business and economic contexts. It provides students with an understanding of the geography, society, culture and ideology in China. The course is conducted in a research-based approach, through lectures, readings, presentations and discussions. Students will learn the fundamental bases of Chinese society from a historical and global perspective. They will also achieve a better understanding of business activities in China.

Prerequisite(s):

CHIN 232 or permission of the instructor.

CHIN 397. Intensive Reading and Writing in Chinese I**Credits 3.00 PeopleSoft Course ID 012451 Grading Basis GRD**

The major goal of this course is to help students intensively develop proficiency in reading and writing based on their competence in listening and speaking. Students are expected to appropriately express their ideas in writing on a wide range of topics and achieve reading competence in Mandarin Chinese. **Prerequisite(s):** Permission of the instructor.

CHIN 398. Intensive Reading and Writing in Chinese II**Credits 3.00 PeopleSoft Course ID 012691 Grading Basis GRD**

Continuation of intensive training in the reading and writing of modern Mandarin Chinese. Instruction is in Chinese. **Prerequisite(s):** CHIN 397 or permission of the instructor.

CHIN 435. Translation Strategies**Credits 3.00 PeopleSoft Course ID 013723 Grading Basis GRD**

This course discusses the different theoretical strategies of translation and applies them in extensive practical experiences using internet-based language resources in various topics of interest, thus to improve students' knowledge of Chinese language and translation competence. **Prerequisite(s):** CHIN 300.

CHIN 446. Special Topics in Chinese Literature**Credits 3.00 PeopleSoft Course ID 013724 Grading Basis GRD**

This course will examine a particular topic in Chinese literature. It may cover all or a specific Chinese literature genre. Course may be repeated if content varies. **Prerequisite(s):** Chinese minors only: CHIN 300.

CHIN 447. Special Topics in Chinese Culture**Credits 3.00 PeopleSoft Course ID 013725 Grading Basis GRD**

Students will study a particular topic in the culture of Chinese-speaking countries. Course may be repeated if content varies. Instruction is in English.

CHIN 448. Special Topics in Chinese Linguistics**Credits 3.00 PeopleSoft Course ID 013778**

Students will study a particular topic in Chinese linguistics. Topics could include an introduction to Chinese sociolinguistics or psycholinguistics.

Course may be repeated if content varies. **Prerequisite(s):** For Chinese minors: CHIN 300. For other students: Permission of the instructor.

Classics

CLAS 100. Latin and Greek Roots of English Words**Credits 3.00 PeopleSoft Course ID 003424 Grading Basis GRD**

Intensive study of Latin and Greek word-roots, prefixes and suffixes in the forms they take in English words. An English vocabulary-development course for students with no knowledge of Latin or Greek. Does not count toward licensure in Latin.

CLAS 266. Greek and Roman Classics in Translation**Credits 3.00 PeopleSoft Course ID 000722 Grading Basis GRD**

Discussion of the writings that illustrate the cultural values and intellectual attitudes which constitute the most important legacy of Classical civilization. All readings are in English.

CLAS 338. Roman Religion**Credits 3.00 PeopleSoft Course ID 014257 Grading Basis GRD**

Roman religion will treat the history and nature of Roman religion from its earliest manifestations in the early Republic through the rise of Christianity and its legalization in A.D. 313 and end in the fifth century AD after an examination of the interactions of paganism and Christianity. It will address the great diversity of pagan cults, the cross-cultural interaction across the Mediterranean and beyond and the variety of cultic practice and thought.

CLAS 360. Topics in Greek and Roman Culture**Credits 3.00 PeopleSoft Course ID 011801 Grading Basis GRD**

A study of selected topics in the culture of Ancient Greece and Rome. May be repeated for credit with change of topics.

CLAS 490. Special Studies in Classics**Credits 1.00-4.00 PeopleSoft Course ID 014314 Grading Basis GRD**

Special topics or independent studies in classics.

College of Business

COB 110. First-Year Success Seminar**Credits 1.00 PeopleSoft Course ID 014073 Grading Basis GRD**

This course is designed to assist first year students with the transition from the high school classroom to the college classroom by developing a better understanding of the learning process while acquiring essential academic skills. Conducted in a seminar setting, this course provides a support group by discussing concerns confronting first year students. Throughout the semester students will engage with various guest speakers to learn about available resources and explore business career paths. **Prerequisite(s):** *Declared business major; first year students only.*

COB 111. Business Learning Community Seminar**Credits 1.00 PeopleSoft Course ID 013907 Grading Basis CNC**

This course introduces students to business careers, academic course work in the James Madison University College of Business, and faculty, staff, and alumni who offer insights for success. Students will learn what is expected to achieve academic success and succeeding in the business world. Students will also engage in the JMU environment and develop leadership and civic responsibility skills. Students will reflect on learned concepts through written and oral assignments, guest lectures, and service learning. **Prerequisite(s):** *MadisonBiz Residential Learning Community students only.*

COB 191. Business Analytics I**Credits 3.00 PeopleSoft Course ID 001986 Grading Basis GRD**

The application of data analysis and statistical methods in business. Introduces data visualization, descriptive statistics, probability, sampling, estimation and hypothesis testing. Emphasis is on using spreadsheet tools and functions for statistical analysis to support analytical decision-making in a business environment. **Prerequisite(s):** *One of the following: MATH 155, MATH 156,*

MATH 205, MATH 231, MATH 235, ISAT 151, or sufficient score on the mathematics placement exam.

COB 202. Interpersonal Skills**Credits 3.00 PeopleSoft Course ID 010430 Grading Basis GRD**

An applied course consisting of experiential exercises followed by class discussion. Cases are used as learning activities where the instructor acts as a facilitator to learning. Essential theory emanates from class discussions with a student-based rather than instructor-based format. Theory and application are intertwined by means of student self-assessment exercises and group discussion. **Prerequisite(s):** *Open only to sophomore business majors.*

COB 204. Computer Information Systems**Credits 3.00 PeopleSoft Course ID 002186 Grading Basis GRD**

An introduction to computer-based information systems for students with a major in the COB or a CIS minor. Emphasis is placed on the role of computers in business and society, computer hardware and software, analysis, design and implementation of information systems, computer ethics, and collaboration using computers. Students will create databases and collaborate using computer-based tools.

COB 241. Financial Accounting**Credits 3.00 PeopleSoft Course ID 001044 Grading Basis GRD**

This course examines the role of financial data in contemporary society; the problems of measuring and reporting income, assets, liabilities and equities; and the interpretation of financial statements. **Prerequisite(s):** *Sophomore standing and declared business major or accounting minor.*

COB 242. Managerial Accounting**Credits 3.00 PeopleSoft Course ID 007744 Grading Basis GRD**

The attention-directing and problem-solving functions of accounting in relation to current planning and control, evaluation of performance, special decisions and long-range planning. **Prerequisite(s):** *COB 241.*

COB 291. Business Analytics II**Credits 3.00 PeopleSoft Course ID 001220 Grading Basis GRD**

The application of quantitative modeling and analysis to managerial decision-making. Introduces techniques from predictive and prescriptive analytics including linear optimization, decision analysis, queuing, regression, timeseries forecasting, and simulation. Emphasis is on implementing, solving, and interpreting results from spreadsheet models for business applications. **Prerequisite(s):** *COB 191 or MATH 220 and MATH 205 or equivalent.*

COB 300A. Integrative Business: Management**Credits 3.00 PeopleSoft Course ID 008538 Grading Basis GRD**

COB 300A is the management component of an integrated learning experience consisting of four courses, taken concurrently, which introduces the fundamental conceptual tools of management, finance, operation and marketing in such a way as to establish their mutual relevance and interdependence. Students work in small project teams on tasks designed to require the application in concert of conceptual tools from each of the function areas.

Prerequisite(s): *Completion of all required 100- and 200-level B.B.A. core courses, junior standing (56 hours), formal admission to the College of Business and COB 242.*

COB 300B. Integrative Business: Finance**Credits 3.00 PeopleSoft Course ID 005416 Grading Basis GRD**

COB 300B is the finance component of an integrated learning experience consisting of four courses, taken concurrently, which introduces the fundamental conceptual tools of management, finance, operation and marketing in such a way as to establish their mutual relevance and interdependence. Students work in small project teams on tasks designed to require the

application in concert of conceptual tools from each of the function areas.

Prerequisite(s): Completion of all required 100- and 200-level B.B.A. core courses, junior standing (56 hours), formal admission to the College of Business and COB 242.

COB 300C. Integrative Business: Operations

Credits 3.00 PeopleSoft Course ID 009552 Grading Basis GRD

COB 300C is the operations component of an integrated learning experience consisting of four courses, taken concurrently, which introduces the fundamental conceptual tools of management, finance, operation and marketing in such a way as to establish their mutual relevance and interdependence. Students work in small project teams on tasks designed to require the application in concert of conceptual tools from each of the function areas.

Prerequisite(s): Completion of all required 100- and 200-level B.B.A. core courses, junior standing (56 hours), formal admission to the College of Business and COB 242.

COB 300D. Integrative Business: Marketing

Credits 3.00 PeopleSoft Course ID 006241 Grading Basis GRD

COB 300D is the marketing component of an integrated learning experience consisting of four courses, taken concurrently, which introduces the fundamental conceptual tools of management, finance, operation and marketing in such a way as to establish their mutual relevance and interdependence. Students work in small project teams on tasks designed to require the application in concert of conceptual tools from each of the function areas.

Prerequisite(s): Completion of all required 100- and 200-level B.B.A. core courses, junior standing (56 hours), formal admission to the College of Business and COB 242.

COB 300H. Integrative Business: Honors

Credits 1.00 PeopleSoft Course ID 013962 Grading Basis GRD

COB 300H is an optional honors component of COB 300. This course provides an in-depth study of theory and research on teams and team effectiveness, which is applied to the COB 300 experience. The course will enable students to better understand team dynamics and how to form and manage teams for superior results. It will also develop their understanding of how to conduct research and will provide a platform for more in-depth honors study within each student's chosen major. **Corequisite(s):** COB 300A, COB 300B, COB 300C and COB 300D.

COB 301. European Integration, Culture and History

Credits 3.00 PeopleSoft Course ID 010816 Grading Basis GRD

This course is designed to complement the COB 300 A-D and will only be offered as part of the semester in Antwerp program. Students will study European integration in the classroom and visit governmental institutions, historical places and cultural events associated with course content.

Prerequisite(s): Requires acceptance to the semester in Antwerp program. Cannot be used as an elective to fulfill any major or minor in COB.

Corequisite(s): Must be taken with COB 300.

COB 318. Legal and Ethical Environment of Business

Credits 3.00 PeopleSoft Course ID 000505 Grading Basis GRD

A study of the law as a means of social, political and economic change. The course focuses on the law in positive leadership development and organizational success. The course has two main goals: To develop leaders who are able to achieve success by understanding the legal and ethical aspects of their business responsibilities and to show how organizations can achieve competitive advantage by reducing legal risk and using the law to create economic value, while also encouraging responsible conduct. The course examines legal and ethical issues that every businessperson should understand

to make sound business decisions in a global environment. It provides an overview of the legal system, the nature and uses of law, ethical decision-making frameworks, business organizations and agency, contract law, torts and the law of product liability, criminal law, the regulatory environment, intellectual property, employment law, securities law, and mergers and acquisitions law. **Prerequisite(s):** COB 300. **Corequisite(s):** COB 300.

COB 487. Strategic Management

Credits 3.00 PeopleSoft Course ID 009866 Grading Basis GRD

Strategic management is designed to be the capstone course for seniors completing their undergraduate studies in the various functional areas of business administration. The course is comprehensive and structured to build on the foundational knowledge students have gained through completing the interdisciplinary COB 300, Integrated Functional Systems, learning experience and from their respective concentrations. **Prerequisite(s):** COB 300, COB 318, senior standing and completion of one full academic semester after completing COB 300.

COB 490. Special Studies in Business Administration

Credits 1.00 - 3.00 PeopleSoft Course ID 011211 Grading Basis GRD

Designed to give capable students an opportunity to complete a faculty supervised independent study apart from a specific major. **Prerequisite(s):** Permission from the Associate Dean for Academic Affairs.

College of Integrated Science and Engineering

CISE 401. Applied Ethics for Environmental Stewardship

Credits 3.00 PeopleSoft Course ID 014482 Grading Basis GRD

This course will apply ethical reasoning to questions about the environment and our place in the natural world. Students will study a variety of ethical theories and consider the views of thinkers from the past and contemporary society. Topics will include animal rights, conservation and use of natural resources, and environmental justice with respect to pollution and climate change.

CISE 460. Geospatial Intelligence Certificate Program Capstone Project

Credits 3.00 PeopleSoft Course ID 013857 Grading Basis GRD

This is a senior-level course in which students demonstrate how the geospatial knowledge and skills learned from earlier courses can be applied to a national security problem. Key elements of the capstone project include: preparation of a problem statement (intelligence question); identifying sources of information; applying technical, communications and analytic principles; understanding situational conditions; preparing actionable recommendations for decision makers; and communicating findings in a professional manner. Repeatable for a maximum of six credit hours. **Prerequisite(s):** Permission of instructor.

CISE 480. Special Topics in Integrated Science and Engineering

Credits 1.00-6.00 PeopleSoft Course ID 014056 Grading Basis GRD

This is a special topics course designator that can be used for any of a variety of topics that cut across disciplines within the broad realm of integrated science and engineering. Requisites may vary by section.

CISE 481. Robotics Project Summary

Credits 1.00 PeopleSoft Course ID 013690 Grading Basis GRD

Students will reflect upon their experience gained in a prerequisite supervised robotics project course, a robotics internship, a robotics research project or an equivalent experience. Results will be disseminated to the academic community via a presentation, a report and/or other means.

College of Science and Mathematics

CSM 199. Science Outreach in Schools

Credits 1.00 PeopleSoft Course ID 013713 Grading Basis CNC

A service learning course in which students engage in outreach activities in area high schools. Emphasis is placed on planning and implementing effective tutoring or enrichment activities as well as reflection and assessment of outcomes.

CSM 200. Exploration of Topics in STEM**Credits 1.00 - 3.00 PeopleSoft Course ID 014636 Grading Basis GRD**

This course provides introduction to and exploration of a variety of STEM-related topics. Course content will vary and could include introduction to STEM curriculum, academic planning, time management and study skills, stress and anxiety management, campus student resources, undergraduate research topics, graduate school considerations, and discussion of STEM career options. May be repeated for credit as course content changes. Students should consult the instructor prior to enrolling for this course. Course provides university elective credit. **Prerequisite(s):** *Permission of the instructor.*

CSM 299. General Instructional Methods for Science in Grades 6-12**Credits 2.00 PeopleSoft Course ID 013714 Grading Basis GRD**

This general teaching methods course provides a solid foundation for planning curriculum and instruction for middle and high school students. Topics include engaging adolescent learners, lesson design, instructional strategies and assessment models. Students in this course must have a science major and expressed a strong interest in becoming a secondary science teacher.

Prerequisite(s): *PHYS 397, Topic: Science Pedagogy*

Communication Sciences and Disorders

CSD 200. Introduction to Communication Disorders**Credits 3.00 PeopleSoft Course ID 003338 Grading Basis GRD**

This course is an introduction to human communication, the most advanced of neurological functions which separates humans from all other species. It surveys both normal and communicatively disordered populations served by audiologists, speech-language pathologists, educators and neuropsychologists.

CSD 207. Phonetics**Credits 3.00 PeopleSoft Course ID 003988 Grading Basis GRD**

Instruction in various transcription techniques for phonetic and phonemic analysis of speech production.

CSD 208. Anatomy and Physiology of the Ear and Voice Mechanism**Credits 3.00 PeopleSoft Course ID 002884 Grading Basis GRD**

A detailed study of the anatomy and physiology of the speech mechanism.

CSD 209. Acoustics of Hearing and Speech**Credits 3.00 PeopleSoft Course ID 000051 Grading Basis GRD**

Introduction to acoustics of speech and hearing. Introduction to physical acoustics, sound generation and transmission, resonance, speech acoustics and speech perception.

CSD 300. Language Development**Credits 3.00 PeopleSoft Course ID 009707 Grading Basis GRD**

The study of language acquisition, development, structure and function in normal children. The development of language in all cultures and the universal nature of the developmental process is the foundation for continued study in speech-language hearing. **Prerequisite(s):** *A grade of "C" or better in CSD 207, CSD 208 and CSD 209; Open to CSD majors only.*

CSD 301. Audiology**Credits 3.00 PeopleSoft Course ID 002395 Grading Basis GRD**

An introduction to the symptoms, causes and treatment of hearing disorders. Hearing test instrumentation and interpretation in clinical situations are emphasized. **Prerequisite(s):** *A grade of "C" or better in CSD 207, CSD 208 and CSD 209 or permission.*

CSD 314. Phonological and Language Disorders**Credits 3.00 PeopleSoft Course ID 002965 Grading Basis GRD**

An introduction to phonological and language disorders in children and adults. Etiological and maintaining factors are discussed, and an overview of assessment and (re)habilitation procedures is presented. **Prerequisite(s):** *CSD 300 or permission.*

CSD 318. Aural Rehabilitation**Credits 3.00 PeopleSoft Course ID 006840 Grading Basis GRD**

Concentrated attention is given to communication problems of the hearing handicapped. Aural rehabilitation is emphasized including lip reading and auditory training. **Prerequisite(s):** *CSD 301 or permission.*

CSD 400. Topics in Speech Production and Perception: Implications for Clinical Populations**Credits 2.00 - 3.00 PeopleSoft Course ID 014078 Grading Basis GRD**

This course is a focused study of topics in speech production and perception as related to communication sciences and disorders. The underlying mechanisms associated with these functions for human communication are surveyed and examined with an emphasis on the effects of communicative disorders. The interdisciplinary nature of communication sciences and disorders is highlighted. This course is relevant to a range of fields of study including (but not limited to) speech-language pathology, audiology, speech, language, hearing sciences, psychology, linguistics, health sciences, nursing and occupational therapy. **Prerequisite(s):** *PSYC 101, CSD 207, CSD 209 and MATH 220, or permission of the instructor.*

CSD 412. Professional Issues and Multicultural Considerations in Communication Disorders**Credits 3.00 PeopleSoft Course ID 013177 Grading Basis GRD**

This course will address professional issues including healthcare disparities, ethical service delivery, and considerations for effective service delivery to culturally and linguistically diverse populations. Linguistic and nonlinguistic features of different cultures and languages will be discussed. **Prerequisite(s):** *CSD 200, CSD 207, CSD 300, CSD 314 and senior standing.*

CSD 415. Neuroanatomy and Neurogenic Communication Disorders

Cross listed with: *BIO 415*

Credits 3.00 PeopleSoft Course ID 004859 Grading Basis GRD

Introduces neurogenic communication disorders from a neuroanatomical approach. **Prerequisite(s):** *For CSD 415: CSD 208 and senior standing, or departmental approval. For BIO 415: CSD 208 or permission.*

CSD 416. Organic Disorders in Communication Sciences and Disorders**Credits 3.00 PeopleSoft Course ID 009980 Grading Basis GRD**

This course will discuss fundamental considerations for communication and swallowing disorders of organic etiology. Discussion of current evaluation methods and treatment strategies are explored. **Prerequisite(s):** *CSD 208, CSD 415 and senior standing.*

CSD 420. Introduction to Sign Language**Credits 3.00 PeopleSoft Course ID 000546 Grading Basis GRD**

Provides an introduction to American Sign Language, the deaf community and English-based signed systems.

CSD 421. Sign Language II**Credits 3.00 PeopleSoft Course ID 004182 Grading Basis GRD**

Focuses on developing conversational skills of students whose core vocabulary and knowledge of the grammar and pragmatics of sign language are basic; distinguishes ASL from English sign systems. **Prerequisite(s):** *CSD 420 or permission.*

CSD 470. Methods and Observation

Credits 3.00 PeopleSoft Course ID 000452 Grading Basis GRD

Directed observation and participation in practical experiences. Introduction to the clinical process in speech-language pathology. Practical clinical methodology will be emphasized. **Prerequisite(s):** *CSD majors only; CSD 314 and senior standing or permission.*

CSD 471. Methods and Observation in Audiology**Credits 3.00 PeopleSoft Course ID 002100 Grading Basis GRD**

An introduction to the clinical process in audiology via directed observation and participation in laboratory and patient interactions. Practical clinical methodology is emphasized. Majors only with interest in graduate study in audiology. Repeatable for credit up to six credits. Must have senior status to enroll. **Prerequisite(s):** *CSD 301 and senior standing or permission.*

CSD 490. Special Studies in Communication Sciences and Disorders**Credits 1.00 - 3.00 PeopleSoft Course ID 006911 Grading Basis GRD**

Provides students opportunity for independent study and/or small class instruction in elective topics.

CSD 499. Honors**Credits 1.00 - 6.00 PeopleSoft Course ID 006127 Grading Basis GRD**

See catalog section "Graduation with Honors."

Communication Studies

SCOM 121. Fundamental Human Communication: Presentations [C1HC]**Credits 3.00 PeopleSoft Course ID 004692 Grading Basis GRD**

Study of human communication as a process. Overview of the principles and practices of interpersonal, small group and public communication. Emphasis on examining the role of self-concept, perception, culture, verbal and nonverbal dimensions in the communication process, using power and managing conflict, applying critical listening, practicing audience analysis within informative speech making. Public speaking required. May be used for general education credit. May not be used for major credit.

SCOM 122. Fundamental Human Communication: Individual Presentations [C1HC]**Credits 3.00 PeopleSoft Course ID 011217 Grading Basis GRD**

Study of human communication as a process. Overview of the principles and practices of interpersonal, small group and public communication. Emphasis on examining the role of self-concept, perception, culture, verbal and nonverbal dimensions in the communication process, using power and managing conflict, applying critical listening, practicing audience analysis within informative speech making. Public speaking required. May be used for general education credit. May not be used for major credit.

SCOM 123. Fundamental Human Communication: Group Presentations [C1HC]**Credits 3.00 PeopleSoft Course ID 011218 Grading Basis GRD**

Study of human communication as a process. Overview of the principles and practices of communication in small group and public communication contexts. Emphasis on examining the role of self-concept, perception, culture, verbal and nonverbal dimensions in the communication process, using power and managing conflict, applying critical listening, practicing audience analysis, and constructing informative and persuasive group presentations. Public speaking required. May be used for general education credit. May not be used for major credit.

SCOM 123H. Fundamental Human Communication: Group Pres - Honors [C1HC]**Credits 3.00 PeopleSoft Course ID 011275 Grading Basis GRD**

Study of human communication as a process. Overview of the principles and practices of communication in small group and public communication contexts.

Emphasis on examining the role of self-concept, perception, culture, verbal and nonverbal dimensions in the communication process, using power and managing conflict, applying critical listening, practicing audience analysis, and constructing informative and persuasive group presentations. Public speaking required. May be used for general education credit. May not be used for major credit. **Prerequisite(s):** *Honors Students*

SCOM 240. Introduction to Communication Theory**Credits 2.00 PeopleSoft Course ID 013191 Grading Basis GRD**

Study of theories and models that inform understanding of human communication processes. Emphasis on the processes of theory building, comparison of theories, and the implications and application of theory to particular contexts. Consideration of role of communication in all human endeavors. The SCOM 240L lab and SCOM 240 lecture portions must be taken concurrently. **Prerequisite(s):** *SCOM major declared or SCOM minor declared students only, and any SCOM course.*

SCOM 240L. Communication Theory Lab**Credits 1.00 PeopleSoft Course ID 013111 Grading Basis GRD**

This lab is designed to complement and supplement the SCOM 240 lecture course. Students will discuss, write and/or give presentations related to content covered in SCOM 240. The SCOM 240L lab and SCOM 240 lecture portions must be taken concurrently. **Prerequisite(s):** *SCOM major declared or SCOM minor declared students only, and any SCOM course.* **Corequisite(s):** *SCOM 240.*

SCOM 242. Presentational Speaking**Credits 3.00 PeopleSoft Course ID 009726 Grading Basis GRD**

Study of methods for preparing and presenting public speeches. Consideration of impromptu and extemporaneous speaking, sales speeches, business presentations and other special occasion speeches. Emphasis on performance and evaluation. **Prerequisite(s):** *Any SCOM course.*

SCOM 244. Sport Communication Techniques: Writing and Reporting

Cross listed with: *KIN 244, SMAD 244*

Credits 3.00 PeopleSoft Course ID 013017 Grading Basis GRD

Basic skills of sport writing and reporting are studied and applied. Students gain experience in a variety of sports and learn and apply skills in researching, interviewing, reporting, writing columns and features involving the world of sports. **Prerequisite(s):** *KIN 242.*

SCOM 245. Signs, Symbols and Social Interaction**Credits 3.00 PeopleSoft Course ID 002382 Grading Basis GRD**

The study of verbal and nonverbal communication as used in human interaction. Consideration given to the function of symbolic systems in self-concept development, the structuring of reality and social discourse. Attention is directed toward the use of signs and symbols by different ethnic groups, genders, age groups and geographic groups. **Prerequisite(s):** *SCOM major Declared" or "SCOM minor Declared" students only and any SCOM course.*

SCOM 248. Intercultural Communication**Credits 3.00 PeopleSoft Course ID 001042 Grading Basis GRD**

The study of human communication in a variety of cultural settings and contexts. Emphasis on developing understanding and analytical skills regarding communication between people from different racial, ethnic and cultural backgrounds in both domestic and international settings. Consideration of relevance and application to social, business and political environments.

SCOM 260. Introduction to Public Relations**Credits 3.00 PeopleSoft Course ID 000838 Grading Basis GRD**

Study of basic principles and practices of public relations. Consideration given to public relations problems and pragmatic solutions utilizing oral, written and electronic communication media and skills.

SCOM 261. Public Relations Techniques I: Written

Credits 3.00 PeopleSoft Course ID 006975 Grading Basis GRD

Study of writing fundamentals for public relations. Emphasis on practice of effective writing for a variety of media (press releases, public service announcements, brochures, newsletters). Must be able to use word processing software. **Prerequisite(s):** SCOM 260.

SCOM 280. Introduction to Communication Research

Credits 3.00 PeopleSoft Course ID 003313 Grading Basis GRD

An introduction to the principles, methods and analysis techniques used in the field of communication. Emphasis on a broad-based understanding of the breadth of research in the field. Includes both qualitative and quantitative research methods, methods of literature review and research article critiques. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** SCOM 240.

SCOM 300. Interdisciplinary Special Topics in Communication Studies

Credits 1.00 - 3.00 PeopleSoft Course ID 014620 Grading Basis GRD Repeatable.

This course is a study of interdisciplinary topics and issues in human communication. Emphasis will be on contemporary theories, research and principles. May be repeated up to six credits.

SCOM 301. Feminist Blogging: Writing for Shout Out! JMU

Cross listed with: WGSS 301.

Credits 3.00 PeopleSoft Course ID 014028 Grading Basis GRD

The goal of this course is to work in a feminist collective to write daily blog posts for the Shout Out! JMU blog. Students will organize the blog, research and write blog posts, publicize the blog, and create dialogue by commenting on one another's blog posts as a means of consciousness raising.

SCOM 302. Third Wave Ecofeminism

Cross listed with: WGSS 302

Credits 3.00 PeopleSoft Course ID 013658 Grading Basis GRD

This course explores the historically strong association between women and nature, in which the image of Mother Earth is central, and critiques the power-as-domination assumption of our culture shown in the exploitation of women and of the earth itself. Religious, psychological, social, historical and scientific manifestations of this assumption will be examined, along with alternative models of power and responsibility. Students will explore the considerable research on ecofeminism.

SCOM 303. Special Topics in Health Communication

Credits 3.00 PeopleSoft Course ID 014029 Grading Basis GRD

Study of current topics and issues in health communication. Course content will vary by faculty. See MyMadison for the topic. May be repeated up to six credits

SCOM 305. Language and Culture

Cross listed with: ANTH 305

Credits 3.00 PeopleSoft Course ID 012175 Grading Basis GRD

An introduction to linguistic anthropology. Explores the complex relationships between language and culture through topics such as language acquisition and socialization; language, thought, and worldview; language and identity; multilingualism; how and why languages change; literacy; and the politics of language use and language ideologies.

SCOM 313. Topics in Communication Studies

Credits 1.00 - 3.00 PeopleSoft Course ID 006009 Grading Basis GRD

Study of current topics and issues in human communication. Emphasis on contemporary theories, research and principles. **Prerequisite(s):** Nine hours of SCOM courses including SCOM 240 and one at 100 level.

SCOM 314. Communication in Romantic Relationships

Credits 3.00 PeopleSoft Course ID 013433 Grading Basis GRD

This class acquaints students with relevant theory and research associated with communication in various stages of romantic relationships including initiation, maintenance and dissolution. Emphasis is on honing one's ability to understand communication theory, research, and application while enhancing one's communication skills in romantic relationships. Additionally, students will improve their ability to communicate about relationship research through writing, presenting and discussing.

SCOM 318. Practicum in Communication Studies

Credits 1.00 - 6.00 PeopleSoft Course ID 004256 Grading Basis GRD

Approved co-curricular activities and/or projects of a practical nature. No more than six hours of practicum credit can be applied to major. Proposals must be submitted to and approved by the course instructor for section and credit hour registration. To receive repeat credit, see school director. **Prerequisite(s):** Permission of the school director.

SCOM 320. Introduction to Interpersonal Communication

Credits 3.00 PeopleSoft Course ID 006169 Grading Basis GRD

Introduction to the fundamental theoretical perspectives in interpersonal communication. Emphasis on the effects of verbal and nonverbal messages on continuity and change in personal relationships. Consideration of the influence of cultural and social contexts on messages in relationships. Development of communication competence in diverse interpersonal contexts.

SCOM 325. Small Group Communication

Credits 3.00 PeopleSoft Course ID 010441 Grading Basis GRD

Study of communication processes involved in solving problems when working with others in a small group context. Emphasis on concepts of roles, norms, leadership and decision-making. Consideration of small group factors which influence problem-solving effectiveness. **Prerequisite(s):** SCOM 121, SCOM 122 or SCOM 123.

SCOM 330. Special Topics in Interpersonal Communication

Credits 3.00 PeopleSoft Course ID 011996 Grading Basis GRD

Study of current topics and issues in interpersonal communication. Topics and issues may include, but are not limited to aging and lifespan, communication education, computer mediated relations, deception and secrecy, friendship and rivalry, relationship rejuvenation and social support. May be repeated up to six credits.

SCOM 331. Communication and Conflict

Credits 3.00 PeopleSoft Course ID 005776 Grading Basis GRD

Consideration of theories of conflict emerging from the communication discipline and application to different forms of conflict at all levels of human interaction. An examination of communication and varied responses to conflict in diverse situations. Emphasis on competencies required for successful management, intervention and transformation of conflict. **Prerequisite(s):** SCOM 240 or SCOM 245 recommended.

SCOM 332. Mediation

Credits 3.00 PeopleSoft Course ID 002141 Grading Basis GRD

Study of analysis and resolution of human conflict. Emphasis on role of mediation in dispute resolution focusing on relationships, language, listening and problem-solving techniques. Consideration of the interpersonal and group approaches to study of conflict management. **Prerequisite(s):** SCOM 240 or SCOM 245 recommended.

SCOM 333. Negotiations**Credits 3.00 PeopleSoft Course ID 012191 Grading Basis GRD**

This course provides an overview of Negotiation as a strategy for dealing with conflict.

SCOM 334. Alternative Dispute Resolution**Credits 3.00 PeopleSoft Course ID 001448 Grading Basis GRD**

Study of conflict resolution processes including mediation, arbitration and negotiation. Consideration of litigation and hybrid dispute processes such as summary jury trial, rent-a-judge and panel evaluation.

SCOM 335. Communication Consulting**Credits 3.00 PeopleSoft Course ID 013112 Grading Basis GRD**

Students learn and apply the best practices for communication consulting in a variety of contexts. Specific emphases may include consulting on public speaking, peer education, visual communication, marketing, group communication, data visualization, and data analysis. Based in contemporary human communication theory, Communication Consulting provides experiential learning opportunities through a practicum in team-based communication consulting. **Prerequisite(s):** SCOM 121, SCOM 122 or SCOM 123.

SCOM 338. The Art of Public Debate**Credits 3.00 PeopleSoft Course ID 013595 Grading Basis GRD**

This course focuses on the practical application and critical examination of debate in the public sphere. The course provides students with experience in researching, constructing and presenting topics for public debate. Additionally, students will be asked to examine pieces of public debate in order to provide them with the tools to critically examine public discourse in a manner consistent with being a productive and active citizen. This course will culminate with a public debate tournament.

SCOM 340. Principles and Processes of Interviewing**Credits 3.00 PeopleSoft Course ID 011997 Grading Basis GRD**

Study of communication principles and processes in interviewing. Emphasis on interpersonal processes involved in interview structures, goals and question types. Development of communication skills in information, persuasive, counseling, health care, employment and performance appraisal interviews.

SCOM 341. Persuasion**Credits 3.00 PeopleSoft Course ID 006186 Grading Basis GRD**

The study of oral communication as a determinant of attitudinal and behavioral change. Emphasis on the various kinds of artistic and nonartistic proofs as they apply to human motivation. Consideration of the application of behavioral research findings to persuasion. **Prerequisite(s):** SCOM 240.

SCOM 342. Argument and Advocacy**Credits 3.00 PeopleSoft Course ID 008410 Grading Basis GRD**

The study of the techniques and principles of argument and advocacy. Emphasis on developing, presenting and defending a position on controversial questions. Consideration given to contemporary theories of public argument.

SCOM 343. Contemporary Rhetorical Theory and Practice**Cross listed with:** WRTC 430**Credits 3.00 PeopleSoft Course ID 012372 Grading Basis GRD**

Examines contemporary rhetorical theory and practice in relation to specific social, economic and technological changes in the 20th century, with particular emphasis on theoretical frameworks. Students learn about the changing needs of postmodern communicators and how new rhetorical theories have developed to anticipate, respond to, and shape those changes. Also explored is the value of contemporary rhetorical theories for communicative and performative events. **Prerequisite(s):** WRTC 200 and WRTC 201 or permission of instructor.

SCOM 344. Oral Interpretation**Credits 3.00 PeopleSoft Course ID 006041 Grading Basis GRD**

Study and application of theories concerning the oral presentation of various forms of literature including prose, poetry, drama and nonfiction materials. Emphasis on performance. **Prerequisite(s):** Any 100-level SCOM course.

SCOM 345. Nonverbal Communication**Credits 3.00 PeopleSoft Course ID 003065 Grading Basis GRD**

Study of nonverbal means through which people relate to one another. Consideration of the communicative effects of environment, facial expression, voice, posture, gestures, touch, distance and physical appearance. **Prerequisite(s):** Any 200-level SCOM course.

SCOM 346. Free Speech in America**Credits 3.00 PeopleSoft Course ID 004115 Grading Basis GRD**

The study of the evolution of freedom of speech in America from Colonial times to the present day. Emphasis on the major periods of development and on the role of courts in defining freedom of speech. Special consideration of contemporary freedom of speech controversies.

SCOM 347. Communication, Diversity and Popular Culture**Credits 3.00 PeopleSoft Course ID 001502 Grading Basis GRD**

This course explores the representational, institutional and communication practices that contribute to the construction of identities and diversity in popular culture. Students will explore how ideologies are reproduced and how understandings of race, class, gender, ethnicity, sexuality, ability and a range of other intersecting axes of identity are shaped within popular culture artifacts. Emphasis will be placed on critical analysis of current popular culture texts. **Prerequisite(s):** SCOM 121, SCOM 122 or SCOM 123.

SCOM 347L. Communication, Diversity and Popular Culture**Credits 3.00 PeopleSoft Course ID 012281 Grading Basis GRD**

Study of the rhetorical dimension of communication practices and texts found in British popular culture. Emphasis on issues of diversity as they are manifested in the communication practices found in British popular culture. Emphasis on strategic communication choices in a diverse, multicultural world. Emphasis on critical thinking, self-reflexivity and communication analysis.

SCOM 348. Communication and Gender**Cross listed with:** WGSS 348**Credits 3.00 PeopleSoft Course ID 006346 Grading Basis GRD**

This course explores the role of communication in the social construction of gender across a variety of contexts. Students will critically examine the interconnectedness of sex, gender, sexuality, race and class toward understanding systems of privilege and oppression in communication practices and social institutions. Focus is on communication as a tool for personal and social change. **Prerequisite(s):** Any 100-level SCOM course.

SCOM 349. Ethnographic Approaches to Communication Studies**Credits 3.00 PeopleSoft Course ID 011605 Grading Basis GRD**

This course examines the value of ethnographic methodologies and other narrative forms of scholarship for enriching understandings of complex social issues and exploring the potential of communication toward shaping social change. Students will develop literacies in reading and evaluating ethnographic works and interrogating their contributions toward cultivating more just social worlds. **Prerequisite(s):** Any 100-level SCOM course or permission of the instructor.

SCOM 350. Organizational Communication**Credits 3.00 PeopleSoft Course ID 000596 Grading Basis GRD**

This course draws on communication theory to analyze various organizational communication practices such as the management of workers, development of

organizational culture and interaction with larger systems. Students gain a complex understanding of organizing practices by investigating how historical events have influenced organizational communication and managerial practices at work. Learning is complemented by an experiential learning project.

SCOM 351. Visual Rhetoric

Cross listed with: *WRTC 351, WRTC 351L*

Credits 3.00 PeopleSoft Course ID 011852 Grading Basis GRD

A study of the rhetorical foundations of visual and verbal arguments in academic disciplines and popular culture. Students will analyze and produce visual and verbal arguments in a variety of rhetorical contexts. **Prerequisite(s):** *WRTC 103 and any 100-level communication studies course or permission of the instructor.*

SCOM 352. Communication and Social Movements

Credits 3.00 PeopleSoft Course ID 007123 Grading Basis GRD

A study of the use of communication in social movements. Emphasis on the types of communication used in social movements and on ways to produce and respond to such messages. This course examines a variety of different social movements within the political process including nonprofit organizations.

SCOM 353. American Political Culture and Communication

Credits 3.00 PeopleSoft Course ID 004984 Grading Basis GRD

Study of functions performed by communication in politics. Emphasis on a variety of communication forms and techniques used by advocates both in campaigning and governing. Consideration of contemporary campaigns and the role of communication in their successes and failures. **Prerequisite(s):** *SCOM 240 and POSC 225 are recommended.*

SCOM 354. Environmental Communication and Advocacy

Credits 3.00 PeopleSoft Course ID 011606 Grading Basis GRD

An exploration of the multifaceted aspects of environmental controversies including the rhetoric, advocacy campaigns, and decision-making processes that produce and attempt to manage environmental conflict. Emphasis on persuasive efforts by interest groups, corporations, resource managers, government agencies, scientific experts, politicians and citizens to influence public understanding of environmental issues, adoption of sustainable behavior and lifestyles and public policy outcomes.

SCOM 355. Food as Communication

Credits 3.00 PeopleSoft Course ID 013794 Grading Basis GRD

This course examines food as symbolic in everyday life, with attention to negotiated understandings of identities, communities, cultures and environments. The course focuses on issues such as how we communicate identity through food consumed and not consumed; how food choices create, shape and reflect communities and cultures; how messages from mass media and government frame, influence and shape food practices; and how food practices intersect, communicate and impact surrounding environments.

Prerequisite(s): *SCOM 121, SCOM 122 or SCOM 123.*

SCOM 357. Youth, Communication and Culture

Cross listed with: *SMAD 357*

Credits 3.00 PeopleSoft Course ID 013051 Grading Basis GRD

This course critically examines the complex and evolving interconnections between young people, communication and culture. Grounded in the understanding that there is no one singular lived experience of "youth," the course focuses on: how young people are represented in popular culture artifacts; how cultural beliefs about various young people are constructed by public discourse; how diverse young people navigate popular culture messages; how they are constructed as target markets; and how they use technology to claim space in the broader culture. Encourages students to

examine their own experiences with and relationships to a range of communication artifacts.

SCOM 358. Business and Professional Communication Studies

Credits 3.00 PeopleSoft Course ID 006757 Grading Basis GRD

Students investigate the nuance and complexity of communication in modern organizational life. A portion of the class is dedicated to the skills involved in a competitive, successful career search. In addition, students develop the skills to become an ethical and effective organizational citizen. **Prerequisite(s):** *Junior or senior status.*

SCOM 360L. British Media and Society

Cross listed with: *HUM 251L, SMAD 360L, WRTC 360L*

Credits 3.00 PeopleSoft Course ID 012295 Grading Basis GRD

Study the history, nature, and impact of mass media in the United Kingdom. Emphasis on the impact modern media has on society, and society has on media. Consideration of similarities and differences in mass media in the United States and Great Britain. Consideration of the relationship between mass media and the arts. Focus on 20th century mass media in London, one of the world's preeminent and most influential centers.

SCOM 361. Public Relations Techniques II: Visual

Credits 3.00 PeopleSoft Course ID 007957 Grading Basis GRD

Study of visual communication techniques for public relations. Survey of design principles and elements used for developing visually effective messages with an emphasis on publication design and production, photography, and computer-mediated presentations. Students should provide a camera and be familiar with desktop publishing and presentational software. **Prerequisite(s):** *SCOM 261; open to SCOM public relations concentration students only.*

SCOM 362. Public Relations Theory and Concepts

Credits 3.00 PeopleSoft Course ID 013634 Grading Basis GRD

The purpose of this course is to introduce students to the theoretical body of knowledge in public relations. In this course, students will learn core tenants of important theories and concepts and apply these to the ethical practice of public relations. The breadth of theories covered will be useful for any public relations specialization and builds an essential foundation to better understand the research-based character of the public relations process. **Prerequisite(s):** *SCOM 260.*

SCOM 363. International Public Relations

Credits 3.00 PeopleSoft Course ID 012098 Grading Basis GRD

Explores the special professional challenges and opportunities arising from the dynamic global public relations developments characterizing the beginning of this century, taking into account social, economic, political, legal, and cultural factors as well as new media developments. **Prerequisite(s):** *SCOM 260.*

SCOM 365. Sports Public Relations

Credits 3.00 PeopleSoft Course ID 013434 Grading Basis GRD

This class is designed to provide students with opportunities to explore the profession of sports public relations. In this class, students will discuss various sports communication issues including media relations, community relations, player relations, fan relations, crisis communication, sports social responsibility and more. **Prerequisite(s):** *SCOM 260.*

SCOM 367. Advanced Public Relations Writing

Credits 3.00 PeopleSoft Course ID 011998 Grading Basis GRD

Offers advanced public relations students experience in the wide range of writing style and applications that are essential to successfully begin their professional careers. The course focuses on understanding and mastering action-oriented communication methods and best professional practices. Provides both a conceptual framework and in-depth training in advance

techniques. **Prerequisite(s):** SCOM 261. *Open to SCOM public relations concentration students only.*

SCOM 369. Topics in Engaged Public Relations

Credits 3.00 PeopleSoft Course ID 013635 Grading Basis GRD

Students will explore specific context of public relations and how public relations theories, processes, and skills can be used in the context. During the semester, students will discuss specific publics within the context and apply ethical communication strategies and tactics to engage with those publics. Courses provided could include crisis communication, corporate social responsibility, social media management, fashion public relations, etc. based on the expertise of the instructor. **Prerequisite(s):** SCOM 260.

SCOM 370. Introduction to Health Communication

Credits 3.00 PeopleSoft Course ID 002536 Grading Basis GRD

An introduction to the study of communication in health and illness contexts. Covers the impact of interpersonal relationships, sociocultural and organizational influences, and media and health campaigns on health beliefs and behaviors. Emphasizes strategies and approaches that promote effective communication in a variety of health contexts. **Prerequisite(s):** Any 100-level SCOM course.

SCOM 381. Rhetorical Research Methods

Credits 3.00 PeopleSoft Course ID 009547 Grading Basis GRD

The study of rhetorical and critical research methods in various communication contexts. Emphasis is on developing and applying appropriate standards to consider communicative factors such as audience, tone, and rhetorical strategies. Consideration of criticism of public address, mass media, and other forms of persuasive communication. Students will be expected to conduct an original research project and present findings in a paper and/or oral presentation. **Prerequisite(s):** SCOM 280.

SCOM 383. Quantitative Experimental Research Methods

Credits 3.00 PeopleSoft Course ID 007147 Grading Basis GRD

The study of quantitative research methods in various communication contexts. Emphasis is on ability to research literature, develop and evaluate experimental design, and apply and interpret statistical tests. Students will be expected to conduct an original research project and present findings in a paper and/or oral presentation. **Prerequisite(s):** SCOM 280

SCOM 385. Qualitative Research Methods

Credits 3.00 PeopleSoft Course ID 011744 Grading Basis GRD

Study of interpretive approaches to communication research using a variety of qualitative research methods, including field observation, qualitative interviewing, focus groups, narrative analysis and discourse analysis. Students will plan and conduct an exploratory qualitative study, prepare a written research report including a literature review and make a research presentation. **Prerequisite(s):** SCOM 280.

SCOM 386. Survey Research Methods

Credits 3.00 PeopleSoft Course ID 002591 Grading Basis GRD

The study of survey research methods in various communication contexts. Emphasis on using survey research methodology in communication audits, public relations problems and public opinion polling and the ability to research literature, develop and evaluate survey questions, and apply and interpret statistical tests. Students will be expected to conduct an original research project and present findings in a paper and/or oral presentation.

Prerequisite(s): SCOM 280.

SCOM 388. Campaign Research Methods

Credits 3.00 PeopleSoft Course ID 013622 Grading Basis GRD

The study of research methods in various communication contexts. Emphasis is on ability to use research methods at various stages of communication planning including background research, primary research, strategic planning, monitoring and evaluation. Students will be expected to conduct an original research project and present findings in a paper and/or oral presentation.

Prerequisite(s): SCOM 280.

SCOM 390. Directed Projects

Credits 2.00 - 3.00 PeopleSoft Course ID 006119 Grading Basis GRD
repeatable up to 6 credits

Supervised projects related to any aspect of human communication. Emphasis on original individual or group programs beyond the school's usual curricular or co-curricular offerings. Formal report(s) required for awarding of credit.

Prerequisite(s): *Prerequisite: Permission of the school director.*

SCOM 395. Study Abroad Seminar

Credits 3.00 - 6.00 PeopleSoft Course ID 011999 Grading Basis GRD

Intensive examination of specialized international communication topics arranged in cooperation with a faculty member. Prior arrangements must be made with the program director. **Prerequisite(s):** *Permission of the program director and school director required.*

SCOM 413. Advanced Topics in Communication Studies

Credits 1.00 - 6.00 PeopleSoft Course ID 013277 Grading Basis GRD

In-depth exploration and analysis of a communication-related theory, context, topic or problem, culminating in a research project documented in written, oral, visual and/or multimedia presentations. Course content varies based on faculty expertise. **Prerequisite(s):** *Senior standing and 15 hours of SCOM courses.*

SCOM 414. Attachment Communication

Credits 3.00 PeopleSoft Course ID 014429 Grading Basis GRD

This class acquaints students with relevant theory and research associated with the science of attachment, its impact on brain development and its subsequent impact on how we communicate throughout the lifespan. In addition to gaining an in-depth understanding of how attachment impacts communication and relationships throughout life, students will also improve their ability to communicate about attachment research through writing, presenting and discussing.

SCOM 420. Feminist Rhetorics

Cross listed with: WRTC 420

Credits 3.00 PeopleSoft Course ID 012001 Grading Basis GRD

Surveys key women figures in classical and contemporary rhetorical traditions and challenges the strategies used to historicize this tradition from feminist perspectives. Explores diverse feminist rhetorical discourses informed by race, sexual orientation, ethnicity and social class. **Prerequisite(s):** *WRTC 103 or equivalent and junior or senior standing, or permission of the instructor.*

SCOM 425. Leadership Communication

Credits 3.00 PeopleSoft Course ID 012122 Grading Basis GRD

This course promotes understanding and development of organizational leadership through investigation of theory and analysis. Students explore varied and sometimes contradictory models of leadership and learn how to articulate and express ideas that encourage others to advocate for and bring about positive change. **Prerequisite(s):** *Junior or senior standing.*

SCOM 431. Legal Communication

Credits 3.00 PeopleSoft Course ID 005461 Grading Basis GRD

Study of the role of communication in the legal process. Emphasis on communication questions/ problems which litigants, lawyers, judges and jurors face. Consideration of legal argument, negotiation, trial advocacy, decision making and communication technologies.

SCOM 432. Senior Seminar in Conflict Analysis and Intervention**Credits 3.00 PeopleSoft Course ID 005680 Grading Basis GRD**

An advanced seminar, capstone course open to all junior and senior SCOM students, and required for conflict majors and minors. Special topics are developed to include research in conflict analysis and intervention, current trends in dispute resolution, evolving practices in conflict transformation, peacemaking, and mediation, as well as other relevant and timely issues.

SCOM 440. Family Communication**Credits 3.00 PeopleSoft Course ID 001114 Grading Basis GRD**

Study of the processes and functions of family communication, including managing dating, marital, parent-child and intergenerational relations. Theoretical and applied examination of communication and cultural processes that define and construct family structures, systems and boundaries. Course also examines histories of family communication as constructed in popular culture. **Prerequisite(s):** SCOM 280.

SCOM 441. Oral History**Cross listed with:** HIST 441**Credits 3.00 PeopleSoft Course ID 011866 Grading Basis GRD**

This course will explore the theory and practice of oral history. Through a series of readings, students will consider the many promises and challenges of the discipline, including issues related to memory, objectivity, ethics, the law, and technology. Students will also engage in an experiential learning exercise in which they collaborate to produce an oral history project.

SCOM 442. Advanced Topics in Advocacy Studies**Credits 3.00 PeopleSoft Course ID 013435 Grading Basis GRD**

Advanced topics in advocacy studies is the concentration's capstone. Through case studies, readings, discussions and experiential activities students investigate complex issues in the field of advocacy. Students apply theoretical knowledge and skills as they explore the interaction between advocacy and communication. **Prerequisite(s):** Senior standing.

SCOM 447. Facilitating Public and Organizational Engagement Processes**Credits 3.00 PeopleSoft Course ID 013436 Grading Basis GRD**

This experiential learning course assists students in learning productive tools and skills for helping organizations and communities talk and think through difficult issues. Students gain experience in how to create spaces that invite new ways of communicating, promote understanding across differences, facilitate choice making and support collaborative action planning.

Corequisite(s): Communication majors or minors who have completed 12 credits in communication.

SCOM 448. Communication, Culture and Identity**Credits 3.00 PeopleSoft Course ID 011607 Grading Basis GRD**

This class examines theory and research of cultural communication, and reflexively considers how communication practices construct identities and arrange social relations within diverse contexts and applied settings.

Prerequisite(s): Any one of the following courses: SCOM 305, SCOM 347, SCOM 348, SCOM 349, SCOM 352, or SCOM 357.

SCOM 449. Communication Training**Credits 3.00 PeopleSoft Course ID 003368 Grading Basis GRD**

This experiential learning course assists students in becoming familiar with strategies and activities designed to help others improve their communication skills. Students gain experience planning and leading meetings, engaging an audience, and facilitating and evaluating training. **Prerequisite(s):** SCOM 242, junior standing and 12 hours in speech communication.

SCOM 450. Advanced Studies in Organizational Communication**Credits 3.00 PeopleSoft Course ID 010245 Grading Basis GRD**

This capstone course uses case studies, readings, discussions and experiential activities to investigate complex issues that emerge for organizations and their members. Students apply theoretical knowledge and skills to the analysis of communication problems through an applied field study in an organization.

Prerequisite(s): SCOM 350 and senior standing.

SCOM 453. Political Campaign Communication**Credits 3.00 PeopleSoft Course ID 008824 Grading Basis GRD**

An advanced study of communication techniques, procedures and processes as they relate to political campaign communication. Emphasis upon the design, execution and production of various communication messages. Consideration of the impact and utilization of various technologies in political campaigns.

SCOM 460. Public Relations Management**Credits 3.00 PeopleSoft Course ID 008606 Grading Basis GRD**

Intensive study and research of advanced communication management skills, theory and principles using case and field studies. Special attention to systematic and ethical management of communication and action affecting an organization's internal and external publics. **Prerequisite(s):** SCOM 260.

SCOM 461. Public Relations Campaigns**Credits 3.00 PeopleSoft Course ID 006989 Grading Basis GRD**

The capstone course for the public relations program of study. Students further their theoretical understanding and practical skills in the processes of research, planning, communication/action, and evaluation by conducting campaigns for specific organizations. **Prerequisite(s):** SCOM 362, one advanced public relations technique course (SCOM 361 or SCOM 367), one advanced research method course (SCOM 381, SCOM 383, SCOM 385, SCOM 386, or SCOM 388), and one public relations context course (SCOM 363, SCOM 365, SCOM 369, or SCOM 460).

SCOM 462. Student-run Public Relations Firm**Credits 3.00 PeopleSoft Course ID 014430 Grading Basis GRD**

This is the capstone course for the public relations program of study. Students further their theoretical understanding and practical skills in the processes of research, planning, communication/action and evaluation by implementing public relations strategies and tactics for specific organizations. Students need to apply to take this course. **Prerequisite(s):** Permission of the school director.

SCOM 464. Communication, Culture and Sports**Credits 3.00 PeopleSoft Course ID 013466 Grading Basis GRD**

This course examines the interrelationship between communication, culture and sports in today's society and how that interrelationship reinforces social values and norms, and the impact of cultural identification of class, race, and gender in connecting sports values with cultural values. Drawing on theories of rhetoric and social criticism, students will study several critical approaches to sports and public discourse and will apply those approaches to sports coverage and organizations. **Prerequisite(s):** Junior or senior standing.

SCOM 465. Rhetoric of Environmental Science and Technology**Cross listed with:** WRTC 416**Credits 3.00 PeopleSoft Course ID 013038 Grading Basis GRD**

This course offers an advanced study of the way the public receives, makes sense of, and influences scientific and technical information about environmental issues. Implications of these processes on environmental policy will be analyzed. Readings and assignments will concentrate on the interactions between technical and public spheres of communication, with an in-depth examination of the way the media facilitates the transfer of information between scientific communities and public audiences. **Prerequisite(s):** WRTC 103 or equivalent and junior or senior standing, or permission of the instructor.

SCOM 468. Patient-Provider Communication

Credits 3.00 PeopleSoft Course ID 014092 Grading Basis GRD

This course prepares students to be effective communicators in the patient-provider context, whether they are in the patient or the provider role. Students will examine communication from the standpoint of the provider as well as the patient, and they will learn strategies to facilitate provider-patient collaboration and shared decision-making.

SCOM 470. Health Communication Campaigns**Credits 3.00 PeopleSoft Course ID 006566 Grading Basis GRD**

Focuses on the theoretical principles and practical considerations relevant to designing, implementing and evaluating health communication campaigns. Emphasis on the collection and analysis of formative research. The final project for the course involves designing a health campaign targeting a specific audience. **Prerequisite(s):** SCOM 370 or permission of the Instructor.

SCOM 471. Culture and Health Communication**Credits 3.00 PeopleSoft Course ID 012915 Grading Basis GRD**

This course explores the relationship between culture and health in different contexts. In particular, the course focuses on the role of communication in understanding diverse health beliefs and engaging in dialogue about our own health beliefs.

SCOM 472. Media and Politics

Cross listed with: POSC 472, POSC 472L, POSC 472W, SCOM 472L, SMAD 472, SMAD 472L

Credits 3.00 PeopleSoft Course ID 008709 Grading Basis GRD

This course is a study of the media's role in the political system, concentrating on the dynamic and interdependent relationships among journalists, politicians, the public and public policy. The course explores media and politics theories; how media practices and technologies shape political decision making; how political forces influence media institutions; and how public opinion and media narratives are shaped.

SCOM 472L. Media and Politics

Cross listed with: POSC 472, POSC 472L, POSC 472W, SCOM 472, SMAD 472, SMAD 472L.

Credits 3.00 PeopleSoft Course ID 008709 Grading Basis GRD

This course is a study of the media's role in the political system, concentrating on the dynamic and interdependent relationships among journalists, politicians, the public and public policy. The course explores media and politics theories; how media practices and technologies shape political decision making; how political forces influence media institutions; and how public opinion and media narratives are shaped. **Prerequisite(s):** *Studies Abroad-London*.

SCOM 490. Special Studies in Communication Studies**Credits 1.00 - 3.00 PeopleSoft Course ID 009195 Grading Basis GRD**

An independent study for students to pursue individual research under the guidance of faculty. Limited to senior communication studies majors in good standing with permission of school director.

SCOM 495. Internship in Communication Studies**Credits 3.00-6.00 PeopleSoft Course ID 000507 Grading Basis GRD**

Credit for the application of communication theory and skills in a directed, on-the-job learning experience. Open only to communication studies majors who meet specific criteria (see the school website). Up to six credits may be applied as electives in the communication studies' major. **Prerequisite(s):** *Permission of the school director*.

SCOM 499A. Honors in Communication Studies**Credits 6.00 PeopleSoft Course ID 010057 Grading Basis GRD**

Year course. **Prerequisite(s):** *Permission of the school director*.

SCOM 499B. Honors in Speech Comm**Credits 3.00 PeopleSoft Course ID 006659 Grading Basis GRD****SCOM 499C. Honors in Speech Comm****Credits 2.00 PeopleSoft Course ID 003099 Grading Basis GRD**

Computer Information Systems

CIS 204. Computer Information Systems Fundamentals for Non-Business Majors**Credits 3.00 PeopleSoft Course ID 013296 Grading Basis GRD**

An introduction to computer-based information systems. Emphasis is placed on the role of computers in organizations and society, computer hardware and software, uses of information systems, computer ethics, and collaboration using computers. Students will use typical business applications. This course is designed to fulfill requirements for the General Business Minor. Not open to business majors. This course may NOT be substituted for COB 204 by business majors or CIS minors. Not open to students who have completed COB 204 with a passing grade.

CIS 221. Principles of Programming**Credits 3.00 PeopleSoft Course ID 010835 Grading Basis GRD**

Students will be required to solve real-world business problems using a programming language. Projects will include the use of control structures (selection and iteration), collections/lists of data, functions and file processing logic. Students will also be introduced to objects and graphical user interfaces. **Prerequisite(s):** *Not open to students who have taken CS 149; or ISAT 252 or IA 241 with a grade of "C" or better; or are taking or have taken CS 159.*

CIS 301. Cloud Server Management**Credits 1.00 PeopleSoft Course ID 010738 Grading Basis GRD**

This is a lab-based course that introduces students to operating systems and server administration in a business environment. Students will learn the basic functions of managing cloud servers through the hands-on use of cloud resources. Additionally, students will acquire hands-on server administration skills in order to better understand the operational and security demands of business applications. **Prerequisite(s):** **Corequisite(s):** *COB majors: COB 300. Non-COB majors: Junior standing and COB 204 or CIS 204.*

CIS 304. Enterprise Architecture**Credits 3.00 PeopleSoft Course ID 006669 Grading Basis GRD**

This course explores the analysis, design, implementation, evaluation and management of enterprise IT solutions. Emphasis will be placed on planning and modeling the enterprise. Topics include functional modeling, physical architecture design, security planning and recovery issues, project management, emerging technologies, and ethical, financial and global considerations. **Prerequisite(s):** *For CIS majors: COB 300. For CIS minors: Junior or senior standing.* **Corequisite(s):** *For CIS majors: COB 300.*

CIS 311. Analyzing Data in Organizations**Credits 3.00 PeopleSoft Course ID 013302 Grading Basis GRD**

This course provides an overview of how to work with databases and other data sources in order to access relevant information in a timely and user-friendly manner. It includes discussions of a variety of data representation types, including relational databases, XML documents and cloud data. Students learn essential database concepts and gain practical experience in querying, reporting, and analyzing data. **Prerequisite(s):** *CIS 204 or equivalent knowledge (instructor permission is needed).* *Open only to Adult Degree Program students.*

CIS 312. Systems Planning and Analysis**Credits 3.00 PeopleSoft Course ID 013303 Grading Basis GRD**

Information systems couple both technical (hardware, software, database, telecom) and socio-organizational (business processes, ethics, knowledge,

users, developers) subsystems to create rich and available information for the purpose of optimizing business decisions. This course covers the techniques and common tools employed for planning and analyzing these systems. Emphasis will be placed on the system development life cycle, planning and analysis tools, and professional business writing. **Prerequisite(s):** CIS 204 or equivalent knowledge (instructor permission is needed). Open only to Adult Degree Program students.

CIS 313. Designing for the Web

Credits 3.00 PeopleSoft Course ID 013514 Grading Basis GRD

This course is an introduction to the design and development of web pages and web sites. Major topics to be covered include: Hypertext Markup Language (HTML5), Cascading Style Sheets (CSS), the principles of design for user experience, responsive design, and JavaScript. **Prerequisite(s):** CIS 204 or equivalent. Not open to CIS majors or minors.

CIS 320. Computing and Telecommunications Networks

Credits 3.00 PeopleSoft Course ID 010086 Grading Basis GRD

This course focuses on the underlying principles of telecommunications and how these principles are deployed to provide efficient and secure networks for providing voice, data, and video services. Emphasis is placed on understanding basic routing, switching, and data aggregation techniques; information security strategies; and understanding how basic information systems applications utilize telecommunications services. **Prerequisite(s):** CIS majors and minors: CIS 304. ISAT majors: ISAT 252. CS majors: CS 149. **Corequisite(s):** CIS majors and minors: CIS 304.

CIS 330. Database Design and Application

Credits 3.00 PeopleSoft Course ID 004316 Grading Basis GRD

A study of the tools and techniques of database analysis and design including the implementation of the design using common database management system models. Not open to students who have taken CS 374. **Prerequisite(s):** For CIS majors: COB 300 and minimum grade of "C" in one of the following: CS 149, CIS 221 or ISAT 252. For CIS minors: Junior or senior standing and minimum grade of "C" in one of the following: CS 149, CIS 221 or ISAT 252. **Corequisite(s):** COB 300.

CIS 331. Intermediate Computer Programming

Credits 3.00 PeopleSoft Course ID 010845 Grading Basis GRD

Study of concepts and techniques used in object-oriented programming for business applications including program specification, design, development, testing, implementation and documentation. Topics include: basic programming structures; method, array and memory analysis; object-oriented principles (encapsulation, inheritance, polymorphism); graphical user interface (GUI) design and database connectivity. **Prerequisite(s):** For CIS majors and minors: CIS 330. **Corequisite(s):** For CIS majors and minors: CIS 330.

CIS 354. Advanced Visual Basic Programming

Credits 3.00 PeopleSoft Course ID 003003 Grading Basis GRD

Advanced course in Visual Basic programming. Emphasis will be placed on Object-Oriented programming, sequential and random data files and error trapping. Other topics covered will include data access objects, client server, printing in VB and Crystal Reports. **Prerequisite(s):** A grade of "C" or better in one of the following: CIS 221, CS 149, or ISAT 252 and CIS 330.

Corequisite(s): CIS 330.

CIS 361. Computer Information Systems Internship

Credits 0.00 PeopleSoft Course ID 004459 Grading Basis CNC

To enable students to gain valuable work experience in a CIS-related field. Requires 300 hours of approved computer information systems work

experience. All work sites must be pre-approved. **Prerequisite(s):** CIS major and COB 300.

CIS 366. Web Design and Development

Credits 3.00 PeopleSoft Course ID 010558 Grading Basis GRD

This course is an introduction to the design and development of web pages and websites. Major topics to be covered include: Hypertext Markup Language (HTML5), Cascading Style Sheets (CSS), the principles of design for user experience, responsive design and a programming language for web development. **Prerequisite(s):** Declared CIS major or CIS minor and a grade of "C" or better in CIS 221, CS 149 or ISAT 252. And: CIS majors: COB 300; CIS minors: junior or senior standing.

CIS 393. Data Mining for Business Analytics

Cross listed with: BSAN 393

Credits 3.00 PeopleSoft Course ID 013222 Grading Basis GRD

This course focuses on using statistical and machine learning techniques in computer applications that allow the extraction of useful, previously unrecognized information from large data sets for predictive purposes. By effectively sifting through databases such as those generated by many businesses, data mining allows the analyst to recognize potentially important patterns and clusters and to target business opportunities. **Prerequisite(s):** Declared BSAN minor or declared BSAN concentration in CIS major, BSAN 390 and BSAN 391.

CIS 420. Computer-Based Networking

Credits 3.00 PeopleSoft Course ID 006558 Grading Basis GRD

An introduction to computer-based networks that incorporates data, voice and video traffic between computer systems and users. Topics include the theory, design and operation of local area networks, wide area networks and private branch exchange systems. **Prerequisite(s):** CIS 320.

CIS 421. Network Security

Credits 3.00 PeopleSoft Course ID 014324 Grading Basis GRD

This course will introduce various topics of cybersecurity and network defense to prevent and investigate malicious attacks and crimes committed with and against computers. Students will be exposed to different aspects of security intrusions and ways to mitigate their impacts.

CIS 424. Computer Security Management

Credits 3.00 PeopleSoft Course ID 001086 Grading Basis GRD

Instruction and discussion in the design, development and implementation of a computer security program including legal and ethical considerations.

Prerequisite(s): CIS 304 and a grade of "C" or better in one of the following: CIS 221, CS 149 or ISAT 252.

CIS 425. Defensive Cybersecurity

Credits 3.00 PeopleSoft Course ID 013515 Grading Basis GRD

This course introduces the concepts of offensive web security through a series of hands-on labs that are built upon real world examples. Doing so allows students to understand the mechanisms of online attacks and learn how to respond to IT security breaches with counter measures. **Prerequisite(s):** CIS 320 or permission of the instructor. **Corequisite(s):** CIS 320 or permission of the instructor.

CIS 428. Mobile Computing and Security

Credits 3.00 PeopleSoft Course ID 013160 Grading Basis GRD

The development of mobile software applications using current environments and frameworks is the primary objective of the class. Several different development and programming environments and platforms will be included as will the actual deployment of the application to a wireless device. An important aspect of the class will be the security implications of deploying mobile

devices. **Prerequisite(s):** A grade of "C" or better in one of the following: CIS 221, CS 149, or ISAT 252 and CIS 331. **Corequisite(s):** CIS 331.

CIS 434. Information Technology Consulting

Credits 3.00 PeopleSoft Course ID 010557 Grading Basis GRD

This course investigates the tools used by and skills necessary for information technology consultants. The class will use a team-oriented project approach. Teams will be assigned professional consulting firms as manager/mentors and will work with their manager/mentor firm to complete projects that cover each phase of the consulting life cycle. **Prerequisite(s):** Permission of the instructor.

CIS 454. Systems Analysis and Design

Credits 3.00 PeopleSoft Course ID 004926 Grading Basis GRD

This course explores the concepts, processes and tools involved in solving contemporary business problems using information systems. Students will focus on developing skills in requirements elicitation, analysis and business modeling in the context of the information systems life cycle.

Prerequisite(s): Declared CIS major or minor; CIS 304 and either CIS 330 or CS 374. **Corequisite(s):** CIS 304 and either CIS 330 or CS 374.

CIS 463. Business Intelligence

Credits 3.00 PeopleSoft Course ID 012565 Grading Basis GRD

This course provides a comprehensive discussion of advanced database techniques, data warehousing, online analytical processing (OLAP), data mining, data visualization, decision support systems (DSS), artificial intelligence (AI) methods and other business intelligence (BI) topics. Students gain practical experience using contemporary BI tools and technologies, and apply sound design principles for creating intelligent solutions to realistic business problems. **Prerequisite(s):** Grade of "C" or better in CIS 330.

CIS 464. Information Systems Project Management

Credits 3.00 PeopleSoft Course ID 011904 Grading Basis GRD

This course focuses on the concepts, tools, techniques and practices for planning and managing information systems projects, including stakeholder management, project risk and team building. Students gain expertise in using project management software. **Prerequisite(s):** For CIS majors: COB 300, and a grade of "C" or better in one of the following: CIS 221, CS 149, or ISAT 252. For declared CIS minors: A grade of "C" or better in one of the following: CIS 221, CS 149, or ISAT 252, and junior standing. **Corequisite(s):** For CIS majors: COB 300.

CIS 484. Information Systems Development and Implementation

Credits 3.00 PeopleSoft Course ID 010847 Grading Basis GRD

Comprehensive development and implementation of enterprise-level systems using object-oriented methodologies, database driven architectures, systems analysis and design procedures, and project management skills. Topics covered will include advanced programming techniques, database processing, GUI design, object communication and a comprehensive group capstone project. **Prerequisite(s):** CIS 331 with a grade of "C" or better and CIS 330 with a grade of "C" or better. **Corequisite(s):** CIS 454

CIS 490. Special Studies in Computer Information Systems or Business Analytics

Cross listed with: BSAN 490

Credits 1.00 - 3.00 PeopleSoft Course ID 000954 Grading Basis GRD

An advanced course in information and/or business analytics designed to give qualified students an opportunity to complete independent study under faculty supervision. **Prerequisite(s):** Senior standing, recommendation of the instructor and written approval of the department head prior to registration.

CIS 498. Special Topics in Computer Information Systems

Credits 1.00-3.00 PeopleSoft Course ID 007690 Grading Basis GRD

An advanced course designed to allow exploration of current topics in computer information systems. Course content will vary. See adviser for current content. **Prerequisite(s):** Permission of the instructor or department. Restricted to CIS majors or minors only.

CIS 499A. Honors

Credits 1.00 - 6.00 PeopleSoft Course ID 003113 Grading Basis GRD

Year course. See catalog section "Graduation with Honors." **Prerequisite(s):** COB 300.

CIS 499B. Honors

Credits 3.00 PeopleSoft Course ID 006608 Grading Basis GRD

Year course. See catalog section "Graduation with Honors." **Prerequisite(s):** COB 300.

CIS 499C. Honors

Credits 2.00 PeopleSoft Course ID 010197 Grading Basis GRD

Year course. See catalog section "Graduation with Honors." **Prerequisite(s):** COB 300.

Computer Science

CS 101. Introduction to Computer Science

Credits 3.00 PeopleSoft Course ID 013278 Grading Basis GRD

How to think like a computer scientist. Topics include an overview of the context of computing, computational operations, computational devices, algorithms and data structures, the storage and transmission of data, the presentation of information, and the limits of computing. Students learn about the design and implementation of computational systems, the value of abstraction, problem solving and the ways in which computation impacts society.

CS 149. Introduction to Programming

Credits 3.00 PeopleSoft Course ID 013259 Grading Basis GRD

Fundamental problem-solving techniques using a modern programming language. Topics include variables, input/output, decisions, loops, functions, arrays, and objects. Students learn about algorithm development, testing strategies, and software tools. Students may not receive credit for both CS 139 and CS 149. You may only enroll in CS 149 at most twice. **Prerequisite(s):** MATH 155, MATH 156 or sufficient score on the Mathematics Placement Exam.

CS 159. Advanced Programming

Credits 3.00 PeopleSoft Course ID 013260 Grading Basis GRD

Students use advanced problem-solving strategies to develop algorithms using classes and objects and techniques such as recursion, exceptions and file I/O. This course also focuses on designing small applications and effective testing strategies. Students may not receive credit for both CS 159 and CS 239. You may only enroll in CS 159 at most twice. **Prerequisite(s):** A grade of "B-" or better in CS 149 or equivalent.

CS 227. Discrete Structures I

Cross listed with: MATH 227

Credits 3.00 PeopleSoft Course ID 011368 Grading Basis GRD

An introduction to discrete mathematical structures including functions, relations, sets, logic, matrices, elementary number theory, proof techniques, basics of counting, graphic theory, discrete probability, digital logic, finite state machines, integer and floating point representations. **Prerequisite(s):** CS 159. **Corequisite(s):** CS 159.

CS 240. Algorithms and Data Structures

Credits 3.00 PeopleSoft Course ID 001980 Grading Basis GRD

Students learn how to implement stacks, queues, lists, sets and maps using arrays, linked lists, binary trees, heaps, binary search trees, balanced trees and hashing. Students study graph representations and algorithms. Students analyze recursive and non-recursive algorithms, illustrated by various searching and sorting algorithms. Additional topics may be included as time permits. You may only enroll in CS 240 at most twice. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and grades of "C-" or better in CS 159, CS 227 /MATH 227 or MATH 245, and MATH 231 or equivalent.*

CS 261. Computer Systems I

Credits 3.00 PeopleSoft Course ID 013691 Grading Basis GRD

This course provides an introduction to the operation of modern interrupt-driven computer systems. Explores the representation of software and information in binary memory, the primary components of a CPU, systems programming and basic interactions with an Operating System. You may only enroll in CS 261 at most twice. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and minimum grade of "C-" in either CS 227/MATH 227 or MATH 245, and in CS 159.*

CS 280. Projects in Computer Science

Credits 1.00 - 3.00 PeopleSoft Course ID 008498 Grading Basis GRD

Projects or topics in computer science which are of interest to the lower division student. May be repeated for credit when course content changes. Topics may vary. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and students should consult the instructor prior to enrolling for the course.*

CS 327. Discrete Structures II

Credits 3.00 PeopleSoft Course ID 011159 Grading Basis GRD

This course builds on the theoretical foundation developed in Discrete Structures I. Students study a range of topics from discrete mathematics and theoretical computer science including elementary number theory, matrices, graph theory, automata, computability and complexity theory. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and grade of "C-" or better in CS 227 /MATH 227 or MATH 245, and CS 240.*

CS 330. Societal and Ethical Issues in Computing

Credits 3.00 PeopleSoft Course ID 013262 Grading Basis GRD

Overview of philosophical and professional ethics, and a survey of societal and ethical issues in computing such as privacy, intellectual property, computer security, computer crime, product liability, and the societal, environmental, and economic impact of computers. Students develop skills in assuming and defending positions on societal and ethical issues through oral presentations and written reports. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only.*

CS 332. Technical Communication for Computer Science

Credits 3.00 PeopleSoft Course ID 013261 Grading Basis GRD

A study of the process of planning, researching, producing and revising technical documents for specific audiences in the computing industry. Document forms studied include definitions, requirements specifications, design specifications, instructions, correspondence, descriptions, plans and reports. Specialized notations and languages are also considered.

Prerequisite(s): *Fully admitted Computer Science majors or minors only.*

CS 343. Application Development

Credits 3.00 PeopleSoft Course ID 014428 Grading Basis GRD

Overview of application software development fundamentals and their use in building stand-alone applications, visualizing and interacting with complex data representations, and controlling the Internet of Things. This course provides an introduction to the technologies used to create modern user interfaces (e.g.,

web technologies), establishing a common foundation for later application-focused courses. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and a grade of "C-" or better in CS 159.*

CS 345. Software Engineering

Credits 3.00 PeopleSoft Course ID 005184 Grading Basis GRD

Study of modern methods and tools for the development of software products. Topics include software development process models, software development tools, design and construction principles and practice, software quality assurance and program management. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and a grade of "C-" or better in CS 159.*

CS 347. Web Development

Credits 3.00 PeopleSoft Course ID 011401 Grading Basis GRD

This course covers design and development of World Wide Web applications. Students examine protocols, architectures, development languages and facilities, and issues such as accessibility, usability, security and reliability. Students work with a suite of development tools and languages to construct a client or server application that includes a GUI and a database. **Prerequisite(s):** *Grade of "C-" or better in CS 343. Fully admitted computer science majors or minors only.*

CS 349. Developing Interactive Multimedia

Credits 3.00 PeopleSoft Course ID 000629 Grading Basis GRD

Students learn the concepts of multimedia, the issues in designing multimedia to interact effectively with users, the performance and speed issues in designing multimedia and how to implement interactive multimedia applications. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and a grade of "C-" or better in CS 240.*

CS 354. Introduction to Autonomous Robotics

Credits 3.00 PeopleSoft Course ID 013263 Grading Basis GRD

A hands-on introduction to programming autonomous mobile robots. The focus of this course is on designing robotic systems that navigate independently in complex environments. Specific topics include localization, mapping, kinematics, path planning and computer vision. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and a grade of "C-" or better in CS 240 and either MATH 220 or MATH 229 or MATH 318.*

CS 361. Computer Systems II

Credits 3.00 PeopleSoft Course ID 013631 Grading Basis GRD

Intermediate exploration of modern interrupt-driven computer systems. Explores models of computation and complex systems, techniques for communication and synchronization of parallel and concurrent software, and the protocols that make up the Internet. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and grades of "C-" or better in CS 240 and CS 261.*

CS 374. Database Systems

Credits 3.00 PeopleSoft Course ID 010085 Grading Basis GRD

An introduction to database design and management with emphasis on data definition, data manipulation and query languages found in modern database management systems. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and a grade of "C-" or better in either CS 240 or CS 343 or equivalent.*

CS 412. Applied Algorithms

Credits 3.00 PeopleSoft Course ID 014096 Grading Basis GRD

A practical study of algorithms and their use in problem solving. Algorithms are selected from categories including divide-and-conquer, greedy, backtracking, network flow and dynamic programming. The classes P and NP are introduced

and intractable problems discussed. This is a programming intensive course.

Prerequisite(s): *Fully admitted Computer Science majors or minors only and a grade of "C-" or better in CS 327 and either MATH 220 or MATH 229 or MATH 318. Students may not receive credit for both CS 412 and CS 452.*

CS 430. Programming Languages

Credits 3.00 PeopleSoft Course ID 006310 Grading Basis GRD

Several actual programming languages are studied in terms of the fundamental principles of computer programming language design, including object-oriented programming, functional programming, concurrent programming and logic programming. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and grades of "C-" or better in CS 240 and CS 261.*

CS 432. Compilers

Credits 3.00 PeopleSoft Course ID 013749 Grading Basis GRD

Introduction to the theory and implementation of compilers. Explores the lexical, syntactic, and semantic analysis of high-level language code as well as code generation, optimization techniques, and architectural or operating system considerations. Course work includes a significant programming component.

Prerequisite(s): *Fully admitted Computer Science majors or minors only and grades of "C-" or better in CS 327 and CS 361.*

CS 442. Logic in Computer Science

Credits 3.00 PeopleSoft Course ID 013264 Grading Basis GRD

An exploration of some of the many connections between logic and computing, such as the application of classical and temporal logic in program verification, logic and logic programming, decidability, computability, automatic theorem proving, the computational complexity of logic algorithms, and applications of logic in artificial intelligence. A course in discrete mathematics or logic is recommended as preparation for this course. **Prerequisite(s):** *Fully admitted Computer Science majors and minors only and junior or senior standing.*

CS 444. Artificial Intelligence

Credits 3.00 PeopleSoft Course ID 007378 Grading Basis GRD

Students will study the history, premises, goals, social impact and philosophical implications of artificial intelligence. Students will study heuristic algorithms for large state spaces and learn to develop recursive and non-deterministic algorithms. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and a grade of "C-" or better in CS 240 and MATH 220, MATH 229 or MATH 318.*

CS 445. Machine Learning

Credits 3.00 PeopleSoft Course ID 014236 Grading Basis GRD

An introduction to the field of machine learning. Explores key problems and algorithms in machine learning from both a theoretical and an applied perspective. Specific topics include supervised and unsupervised learning, anomaly detection, text mining and experimental design. Students who have completed BSAN 393, ISAT 341 and MATH 358 may also take this course.

Prerequisite(s): *Fully admitted Computer Science majors or minors only and a grade of "C-" or better in CS 327 and one of the following: MATH 318, MATH 220 or MATH 229.*

CS 446. Software Analysis and Design

Credits 3.00 PeopleSoft Course ID 004203 Grading Basis GRD

Contemporary software analysis and design methods, tools, notations, techniques, processes, principles and practices. Students solve analysis and design problems alone or in teams and present their work to their peers and the instructor. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and grades of "C-" or better in CS 240 and CS 345.*

CS 447. Interaction Design

Credits 3.00 PeopleSoft Course ID 013963 Grading Basis GRD

Study of and practice with processes, principles, tools, models and techniques for designing interactions between humans and digital products and systems. Topics include physiological and psychological factors affecting interaction design, interaction design processes, interaction models, styles and paradigms, design notations and representations, prototyping, and interaction design evaluation. **Prerequisite(s):** *Fully admitted Computer Science majors or minors and a grade of "C-" or better in CS 343.*

CS 448. Numerical Analysis

Cross listed with: MATH 448

Credits 3.00 PeopleSoft Course ID 008254 Grading Basis GRD

This course is the study and analysis of algorithms used to solve nonlinear equations and systems of linear and nonlinear equations. Students will learn iterative methods for matrices and Newton-type methods as well as numerical differential and integral calculus. Students will perform programming using a high-level language and/or software packages. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only; and MATH 248 or consent of instructor.*

CS 449. Numerical Analysis for Differential Equations

Cross listed with: MATH 449

Credits 3.00 PeopleSoft Course ID 000239 Grading Basis GRD

Study and analysis of numerical techniques to solve ordinary and partial differential equations, including Euler, Runge-Kutta, Picard, finite-difference and finite-element methods. Programming using a high-level language and/or software packages. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and MATH 237, MATH 238 or MATH 336, and MATH 248.*

CS 450. Operating Systems

Credits 3.00 PeopleSoft Course ID 005346 Grading Basis GRD

Introduction to the design and implementation of modern operating systems. Explores fundamental concepts of operating systems, memory management, virtualization, resource allocation, file systems and system protection mechanisms. Course work includes a significant programming component.

Prerequisite(s): *Fully admitted Computer Science majors or minors only and a grade of "C-" or better in CS 361.*

CS 452. Design and Analysis of Algorithms

Cross listed with: MATH 452

Credits 3.00 PeopleSoft Course ID 000092 Grading Basis GRD

An introduction to algorithm design techniques and the mathematical analysis of algorithms. Techniques covered include divide-and-conquer, greedy, backtracking, network flow and dynamic programming. The classes P and NP are introduced and intractable problems are discussed. This is a proof-intensive course. **Prerequisite(s):** *A grade of "C-" or better in CS 327 and either MATH 220 or MATH 229 or MATH 318. Students may not receive credit for both CS 412 and CS 452.*

CS 455. Advanced Computer Networking

Credits 3.00 PeopleSoft Course ID 014248 Grading Basis GRD

An in depth analysis of networking protocols and tools to capture, analyze and synthesize network traffic. Includes significant programming projects that simulate the operation of network protocols. Introduces the design principles and implementation of client-server network applications. **Prerequisite(s):** *Fully admitted computer science majors or minors only with a grade of "C-" or better in CS 361.*

CS 456. Computer Architecture

Credits 3.00 PeopleSoft Course ID 013813 Grading Basis GRD

Introduction to the design and implementation of modern CPU architectures. Explores hardware-based parallel execution, quantitative performance

evaluation, I/O interfacing techniques and hardware descriptor languages. Course work includes a significant programming component. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and a grade of "C-" or better in CS 361.*

CS 457. Information Security

Credits 3.00 PeopleSoft Course ID 011400 Grading Basis GRD

This course covers the basic issues of information system security. The roles of planning, management, policies, procedures and personnel in protecting the confidentiality, integrity and availability of information are described. Specific threats (malicious code, network attacks and hostile content) and widely used countermeasures (access control, mechanisms, firewalls and intrusion detection systems) are also discussed. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only. CS 361 and a grade of "C-" or better in either MATH 220 or MATH 229 or MATH 318. Corequisite(s): CS 361.*

CS 458. Cyber Defense

Credits 3.00 PeopleSoft Course ID 012217 Grading Basis GRD

A hands-on, lab-based learning experience in which the students engage in a series of mini projects to perform security assessment, penetration testing and hardening of networked systems. Students also participate in a cyber defense exercise. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and grades of "C-" or better in CS 457 and CS 361.*

CS 462. Network Applications Development

Credits 3.00 PeopleSoft Course ID 008512 Grading Basis GRD

Design and implementation of network-based applications using languages and architectures such as sockets, JAVA, TL1 and CORBA. Concepts in distributed processing, including synchronization of interprocess communication and management of replicated data. Analysis of performance issues related to distributed applications. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and CIS 361.*

CS 470. Parallel and Distributed Systems

Credits 3.00 PeopleSoft Course ID 013692 Grading Basis GRD

Introduction to parallel and distributed systems. Explores shared memory, cluster, grid, peer-to-peer, and cloud computing models along with parallel software patterns, distributed file systems and performance considerations. Course work includes a significant programming component. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and a grade of "C-" or better in CS 361.*

CS 480. Selected Topics in Computer Science

Credits 1.00 - 3.00 PeopleSoft Course ID 002482 Grading Basis GRD

Topics in computer science which are of interest but not otherwise covered in the regular computer science offerings of the department. Offered only with the approval of the department head; may be repeated for credit when course content changes. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and a grade of "C-" or better in CS 159. Topics selected may dictate further prerequisites; students should consult the instructor prior to enrolling for course.*

CS 482. Selected Topics in Information Security

Credits 1.00 - 3.00 PeopleSoft Course ID 011402 Grading Basis GRD

Topics in information security. Offered only with the approval of the department head; may be repeated for credit when course content changes **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and grades of "C-" or better in CS 240 and CS 261. Topics selected may dictate further prerequisites; students should consult the instructor prior to enrolling for the course.*

CS 488. Computer Graphics Applications

Credits 3.00 PeopleSoft Course ID 000330 Grading Basis OPT

This course develops a computer graphics application package based on standard graphics functions as well as attributes of a graphical user interface. It includes experience in applying interactive computer graphics techniques to industrial problems. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and grades of "C-" or better in CS 240 and CS 261.*

CS 497. Independent Study

Credits 1.00 - 3.00 PeopleSoft Course ID 001642 Grading Basis GRD

An advanced course to give independent study experience under faculty supervision. May be taken multiple times for credit, but no more than three credits may be used in the computer science program graduation requirements. **Prerequisite(s):** *Fully admitted Computer Science majors or minors only and junior standing, and permission of the program coordinator.*

CS 499A. Honors

Credits 1.00 PeopleSoft Course ID 003502 Grading Basis GRD

CS 499B. Senior Honors Thesis

Credits 3.00 PeopleSoft Course ID 004060 Grading Basis GRD

CS 499C. Senior Honors Thesis

Credits 2.00 PeopleSoft Course ID 005209 Grading Basis GRD

Continuing Education

CE 490. Special Studies in Continuing Education

Credits 1.00 - 3.00 PeopleSoft Course ID 011720 Grading Basis GRD

This course is designed to allow exploration of current topics of interest including various trends and issues in a given field of study. **Prerequisite(s):** *Continuing Education Students Only*

Criminal Justice

CRJU 215. Introduction to Criminal Justice

Credits 3.00 PeopleSoft Course ID 006662 Grading Basis GRD

An introduction to the development of the American criminal justice system from early English beginnings to the present in its three dimensions: police, courts and corrections.

CRJU 300. Ethics in Criminal Justice

Credits 3.00 PeopleSoft Course ID 012900 Grading Basis GRD

This class offers an overview of ethical issues in the various branches of the criminal justice system and reviews approaches to establishing and using ethical practices. **Prerequisite(s):** *For Criminal Justice minors: CRJU 215 or JUST 210. For Justice Studies majors: JUST 200 and one other 200-level JUST class, excluding JUST 225. Or permission of instructor.*

CRJU 301. Advanced Level Special Topics in Criminal Justice

Credits 3.00 PeopleSoft Course ID 011917 Grading Basis GRD

This course provides an advanced level examination of topics that are of current interest in the field of criminal justice. The class may be repeated for credit when course content changes. **Prerequisite(s):** *CRJU 215.*

CRJU 321. Criminalistics

Credits 3.00 PeopleSoft Course ID 012901 Grading Basis GRD

This course introduces student to crime scene investigation and the major disciplines of modern forensic science. Topics include an examination of the historical background of forensic science in the criminal justice system, an assessment of general principles of the current practice of forensic science, examination of the role of expert testimony and likely interaction(s) of the forensic scientist with other individuals and components of the criminal justice system. **Prerequisite(s):** *For Criminal Justice minors: JUST 210 or CRJU 215. For Justice Studies majors: JUST 200 and one other 200-level JUST course, excluding JUST 225. Or permission of instructor.*

CRJU 325. Criminology

Credits 3.00 PeopleSoft Course ID 009739 Grading Basis GRD

Study of the extent, causes and possible deterrents to crime including murder, assault, white-collar offenses and organized crime with attention to the role of the victim and policy implications. **Prerequisite(s):** CRJU 215.

CRJU 328. Criminal Procedure**Credits 3.00 PeopleSoft Course ID 007305 Grading Basis GRD**

Study of the criminal justice process from arrest through appeal with emphasis upon the rights of the accused including due process, the right to counsel, search and seizure and the privilege against self-incrimination. **Prerequisite(s):** For Criminal Justice minors: JUST 210 or CRJU 215. For Justice Studies majors: JUST 200 and one other 200-level JUST course, excluding JUST 225. Or permission of instructor.

CRJU 329. Criminal Investigation and Evidence**Credits 3.00 PeopleSoft Course ID 001418 Grading Basis GRD**

Characteristics, legal aspects, organizational objectives, theories and systematic procedure of criminal investigation. Includes a survey of the investigative function, interviewing witnesses, interrogation, physical evidence, the investigation of common serious offenses and the principles of evidence, including the legal rules controlling the presentation of evidence in court.

Prerequisite(s): For Criminal Justice minors: JUST 210 or CRJU 215. For Justice Studies majors: JUST 210 and one other 200-level JUST course, excluding JUST 225. Or permission of instructor.

CRJU 335. Law Enforcement**Credits 3.00 PeopleSoft Course ID 012902 Grading Basis GRD**

This course provides students with an overview of the practice of law enforcement and the legal and social issues associated with this work in the United States. **Prerequisite(s):** For Criminal Justice minors: JUST 210 or CRJU 215. For Justice Studies majors: JUST 200 and one other 200-level JUST course, excluding JUST 225. Or permission of instructor.

CRJU 337. Courts and the Judiciary**Credits 3.00 PeopleSoft Course ID 012903 Grading Basis GRD**

This class offers students an in-depth introduction to the workings of the court system in the United States. **Prerequisite(s):** For Criminal Justice minors: JUST 210 or CRJU 215. For Justice Studies majors: JUST 200 and one other 200-level JUST course, excluding JUST 225. Or permission of instructor.

CRJU 340. Administration of Justice**Credits 3.00 PeopleSoft Course ID 012904 Grading Basis GRD**

This course is designed to identify unique challenges to administrators of criminal justice organizations. The structures, functions and processes in the administration of criminal justice organizations is examined. Topics of interest include a variety of public management theories, the role of leadership and communication as it relates to criminal justice organization. **Prerequisite(s):** For Criminal Justice minors: JUST 210 or CRJU 215. For Justice Studies majors: JUST 200 and one other 200-level JUST course, excluding JUST 225. Or permission of instructor.

CRJU 401. Internship in Criminal Justice**Credits 3.00 PeopleSoft Course ID 011916 Grading Basis GRD**

This course allows students to receive academic credit for work experienced in an agency or organization related to the criminal justice minor. Students should consult the director of the criminal justice minor for assistance in arranging approved internships. **Prerequisite(s):** CRJU 215 and permission of the instructor.

This course allows instructors working through recognized university centers or institutes to offer an examination of current topics that are cross disciplinary in nature and not covered elsewhere in the curriculum. The course may be repeated for credit when course content changes.

CDS 401. Internship**Credits 1.00 - 3.00 PeopleSoft Course ID 013023 Grading Basis GRD**

This course allows students to receive academic credit for work experienced in a recognized JMU center or institute. Internships must be approved in advance by the center director and follow the guidelines established by the participating center or institute. Internship is granted at the discretion of the center director. **Prerequisite(s):** Junior or senior standing and permission of the director.

Dance

DANC 110. Associate Group Dance Repertory I (0, 4)**Credits 1.00 PeopleSoft Course ID 005193 Grading Basis GRD**

Introduction to group dance experiences through rehearsal, performance, dance technique training and technical theatre practice. **Prerequisite(s):** Dance majors only and concurrent enrollment in a dance technique course.

DANC 140. Elementary Modern Dance (0, 4)**Credits 2.00 PeopleSoft Course ID 001249 Grading Basis GRD**

Emphasis on modern dance technique and fundamentals of improvisation and choreography. May be repeated for credit.

DANC 142. Elementary Ballet (0, 4)**Credits 2.00 PeopleSoft Course ID 011025 Grading Basis GRD**

Fundamentals of ballet technique, basic vocabulary and combinations. May be repeated for credit.

DANC 143. International Folk Dance (0, 4)**Credits 2.00 PeopleSoft Course ID 003813 Grading Basis GRD**

Traditional folk dance steps and international folk dances. Emphasis on dances from eastern and western Europe, Mexico and Israel. May be repeated for credit.

DANC 144. Ballroom Dance (0, 4)**Credits 2.00 PeopleSoft Course ID 007163 Grading Basis GRD**

Ballroom dance skills including steps, styling and leading, and following for American and Latin ballroom dance forms. May be repeated for credit.

DANC 146. Jazz Dance (0, 4)**Credits 2.00 PeopleSoft Course ID 008235 Grading Basis GRD**

Fundamentals of jazz technique, basic vocabulary and combinations. May be repeated for credit. **Prerequisite(s):** School of Theatre and Dance majors and minors only.

DANC 147. Tap Dance (0, 4)

Cross listed with: No change.

Credits 2.00 PeopleSoft Course ID 001542 Grading Basis GRD

Fundamentals of tap dance, basic vocabulary and combinations. May be repeated for credit. **Prerequisite(s):** School of Theatre and Dance majors and dance minors only. **Corequisite(s):** No change.

DANC 210. Associate Group Dance Repertory II (0, 4)**Credits 1.00 PeopleSoft Course ID 010434 Grading Basis GRD**

Practice in group dance experiences through rehearsal, performance, dance technique training and technical theatre practice. **Prerequisite(s):** Dance majors only and concurrent enrollment in a dance technique course.

DANC 211. Contemporary Dance Ensemble Repertory I (0, 4)**Credits 2.00 PeopleSoft Course ID 009668 Grading Basis GRD**

Introduction to a modern dance ensemble with performance, choreographic and technical theatre experiences. May be repeated for credit. **Prerequisite(s):** Dance majors only and concurrent enrollment in a dance technique course.

Cross Disciplinary Studies

CDS 301. Special Topics**Credits 1.00 - 3.00 PeopleSoft Course ID 013022 Grading Basis GRD**

DANC 212. Virginia Repertory Dance Company I (0, 4)**Credits 2.00 PeopleSoft Course ID 006664 Grading Basis GRD**

Rehearsal, performance and technical theatre experiences in a modern dance company. May be repeated for credit. **Prerequisite(s):** *Dance majors only and concurrent enrollment in a dance technique course.*

DANC 215. The Dance Experience [C2VPA]**Credits 3.00 PeopleSoft Course ID 014164 Grading Basis GRD**

This course is an exploration of dance as an art form. It emphasizes learning about and experiencing a broad spectrum of dance forms through lecture, discussion, movement exploration, and attending and viewing dance performances. The course considers the historic and cultural significance of dance as well as the components of a dance performance: dancers, choreographic elements, production design (costuming, lighting, scenic elements, etc.) and audience.

The course reveals how dance has informed the human experience throughout history. It does this by placing dance's "embodied way of knowing" within social, artistic, religious, political and cultural contexts. It provides an opportunity for the student to experience an appreciation for the dynamic, varied and complex role that dance has played in human societies over time, and understand how it relates to other art forms.

DANC 240. Intermediate Modern Dance I (0, 4)**Credits 2.00 PeopleSoft Course ID 011026 Grading Basis GRD**

Intermediate skills in modern dance technique. May be repeated for credit.

Prerequisite(s): *None for School of Theatre and Dance majors and dance minors. Non-majors: DANC 140 or permission of the instructor.*

DANC 242. Intermediate Ballet I (0, 4)**Credits 2.00 PeopleSoft Course ID 011027 Grading Basis GRD**

Intermediate skills in ballet technique. May be repeated for credit.

Prerequisite(s): *School of Theatre and Dance majors and dance minors only, or DANC 142 or permission of the instructor.*

DANC 245. Dance Improvisation (0, 4)**Credits 2.00 PeopleSoft Course ID 004704 Grading Basis GRD**

Development of individual, group and environmental awareness; extension of individual movement vocabulary; and theory and exploration of the interrelationships of the visual and theatre arts through structured improvisation. **Prerequisite(s):** *School of Theatre and Dance majors and dance minors only.*

DANC 246. Intermediate Jazz**Credits 2.00 PeopleSoft Course ID 003957 Grading Basis GRD**

Intermediate skills in jazz dance technique, vocabulary and movement combinations. May be repeated for credit. **Prerequisite(s):** *None for School of Theatre and Dance majors and dance minors. Non-majors: DANC 146 or permission of the instructor.*

DANC 247. Intermediate Tap**Credits 2.00 PeopleSoft Course ID 010592 Grading Basis GRD**

Intermediate skills in tap dance technique, vocabulary and models of sequencing. May be repeated for credit. **Prerequisite(s):** *None for School of Theatre and Dance majors and dance minors. Non-majors: DANC 147 or permission of the instructor.*

DANC 248. History of Dance: Renaissance Through the 20th Century**Credits 3.00 PeopleSoft Course ID 006047 Grading Basis GRD**

A survey of dance history in Western civilization from the Renaissance to the present. Emphasis is on the dance idioms of ballet and modern.

DANC 303. Topics in Dance**Credits 1.00 - 3.00 PeopleSoft Course ID 002176 Grading Basis GRD**

Study of selected timely topics in dance. May be repeated when course content changes. See MyMadison for current topic.

DANC 311. Contemporary Dance Ensemble Repertory II (0, 4)**Credits 2.00 PeopleSoft Course ID 004975 Grading Basis GRD**

Intermediate-level experiences in performance, choreography and technical theatre with a modern dance ensemble. May be repeated for credit.

Prerequisite(s): *DANC 211 or the equivalent and concurrent enrollment in a dance technique course.*

DANC 312. Virginia Repertory Dance Company II (0, 4)**Credits 2.00 PeopleSoft Course ID 000014 Grading Basis GRD**

Advanced rehearsal, performance and technical theatre experience in a modern dance company. May be repeated for credit. **Prerequisite(s):** *DANC 212 or the equivalent and concurrent enrollment in a dance technique course.*

Corequisite(s): *No changes.*

DANC 315. Injury Prevention and Conditioning**Credits 3.00 PeopleSoft Course ID 014419 Grading Basis GRD**

This course is designed to educate the dancer and dance education student on specific injury prevention and conditioning principles to improve overall dancer health and wellness. A combination of lecture and movement-based labs will cover all aspects that may contribute to injury risk in dancers and allows recognition of these risks in the educational or performance setting.

Prerequisite(s): *Dance majors, dance minors and STAD majors; or permission of instructor.*

DANC 320. Anatomy and Somatic Studies for the Dancer**Credits 3.00 PeopleSoft Course ID 008838 Grading Basis GRD**

An introduction to the structure and function of the human body, along with an overview of contemporary bodywork theories and techniques essential to the education of dancers. Emphasis will be on the application of knowledge within the context of dance technique. **Prerequisite(s):** *Sophomore, junior and senior dance majors only.*

DANC 325. Dance in Community**Credits 3.00 PeopleSoft Course ID 012194 Grading Basis GRD**

This course introduces students to the use of creative movement and dance in community settings. Emphasis is on concepts and skills utilized in designing and implementing movement experiences for diverse populations.

DANC 340. Intermediate Modern Dance II (0, 4)**Credits 2.00 PeopleSoft Course ID 011028 Grading Basis GRD**

Modern dance technique on an accelerated intermediate level. May be repeated for credit. **Prerequisite(s):** *DANC 240 or permission of the instructor.*

DANC 342. Intermediate Ballet II (0, 4)**Credits 2.00 PeopleSoft Course ID 004027 Grading Basis GRD**

Ballet technique on an accelerated intermediate level. May be repeated for credit. **Prerequisite(s):** *DANC 242 or permission of the instructor.*

DANC 345. Dance Composition I (2, 2)**Credits 3.00 PeopleSoft Course ID 009961 Grading Basis GRD**

Introductory studies of dance composition with focus on the learning and development of choreographic techniques and styles. Compositional movement studies and solo/duet dances will be utilized for exploring and developing the student's individual creativity. **Prerequisite(s):** *Dance majors only.*

DANC 346. Intermediate Jazz II/Musical Theatre Styles**Credits 2.00 PeopleSoft Course ID 010593 Grading Basis CNC**

Intermediate Jazz II / Musical Theatre Styles is a continuation of the jazz dance techniques in the dance program at the upper-intermediate level. The primary focus of this class will be on the study and training of historic and contemporary musical theatre jazz movement and its cultural influences. The

course may be repeated for credit. **Prerequisite(s):** *DANC 246 or permission of the instructor.*

DANC 380. Dance Teaching Practicum

Credits 3.00 PeopleSoft Course ID 014222 Grading Basis GRD

This course provides pre-service teachers with hands-on teaching experience prior to full-time student teaching. The course provides the opportunity for dance education students to observe certified teachers, plan lessons, reflect on effective teaching strategies, analyze the complexities of teaching and demonstrate professional behaviors that promote student learning. Course work includes topics on classroom management, assessment and effective teaching strategies.

DANC 390. Directed Projects

Credits 1.00 – 3.00 PeopleSoft Course ID 014079 Grading Basis GRD

Supervised projects related to the study of dance. Credit given for original, individual or group programs beyond the usual course offerings in dance. A suitable completed project or report is required before credit will be given. Teaching assistantships are also registered as directed projects. May be repeated multiple times. **Prerequisite(s):** *Dance majors only*

DANC 411. Contemporary Dance Ensemble Repertory III (0, 4)

Credits 2.00 PeopleSoft Course ID 004806 Grading Basis GRD

Advanced-level experiences in performance, choreography and technical theatre with a modern dance ensemble. May be repeated for credit.

Prerequisite(s): *DANC 311 or the equivalent and concurrent enrollment in a dance technique course.*

DANC 412. Virginia Repertory Dance Company III (0, 4)

Credits 2.00 PeopleSoft Course ID 002535 Grading Basis GRD

Advanced rehearsal, performance and technical theatre experience in a modern dance company for the professional level dancer. May be repeated for credit.

Prerequisite(s): *DANC 312 or the equivalent and concurrent enrollment in a dance technique course.*

DANC 440. Advanced Modern Dance (0, 4)

Credits 2.00 PeopleSoft Course ID 011029 Grading Basis GRD

Modern dance technique on an advanced level. May be repeated for credit.

Prerequisite(s): *DANC 340 or the equivalent.*

DANC 442. Advanced Ballet (0, 4)

Credits 2.00 PeopleSoft Course ID 011030 Grading Basis GRD

Ballet technique on an advanced level. May be repeated for credit.

Prerequisite(s): *DANC 342 or the equivalent.*

DANC 445. Dance Composition II (2, 2)

Credits 3.00 PeopleSoft Course ID 009284 Grading Basis GRD

Dance composition study involving the development and use of complex choreographic structures with emphasis on creating small and large group dance compositions, as well as the exploration of contemporary choreographic styles and techniques. **Prerequisite(s):** *DANC 345 or permission of the instructor.*

DANC 446. Advanced Jazz

Credits 2.00 PeopleSoft Course ID 010594 Grading Basis GRD

A continuation of the dance technique in the dance program. Advanced skills in jazz technique with special emphasis on the development of performance skills. May be repeated for credit.

DANC 449. The Dance Professional

Credits 3.00 PeopleSoft Course ID 009406 Grading Basis GRD

Introduction to the professional dance world through lectures, discussions and research. Emphasis will be placed on the preparation of skills and materials

necessary to pursue dance as a career. Contemporary dance trends and issues will also be explored. **Prerequisite(s):** *Senior dance majors only.*

DANC 479. Methods of Teaching Dance

Credits 3.00 PeopleSoft Course ID 006678 Grading Basis GRD

An exploration of teaching creative movement in elementary school and dance in secondary school. Topics include creative movement, dance education and arts integration. This course considers lesson planning, classroom management and assessment in middle and high school. **Prerequisite(s):** *Junior and senior dance majors only.*

DANC 480. Student Teaching

Credits 3.00 – 12.00 PeopleSoft Course ID 013675 Grading Basis CNC

Enables students to apply, in the public school classrooms and the comprehensive child development programs, those skills and attitudes acquired in all components of teacher education. Under the guidance of university supervisors, students are provided activities designed to familiarize them with the classroom teacher's role. **Prerequisite(s):** *PSYC 160, EDUC 200 or EDUC 360, appropriate methods courses, and permission of the coordinator of field experiences.*

DANC 490. Special Studies in Dance

Credits 1.00 – 3.00 PeopleSoft Course ID 004743 Grading Basis GRD

Special studies are independent studies for students to pursue individual research under the guidance of a faculty adviser. Special studies differ from directed projects in that they are more research-based than project-based, although some student mainstage designs might also be undertaken as special studies. Based on the agreed upon workload, this course may be assigned credit hours of 1-3 credits. **Prerequisite(s):** *Permission of the dance coordinator.*

DANC 495. Internship

Credits 3.00 – 6.00 PeopleSoft Course ID 005402 Grading Basis GRD

Internships may be registered for credit at the discretion of the individual faculty adviser. Overrides for internships must be completed no later than four weeks prior to the internship start date. Based on the agreed upon workload, this course may be assigned credit hours of 3-6 credits.

Prerequisite(s): *Permission of the dance coordinator.*

DANC 499. Honors

Credits 1.00 – 3.00 PeopleSoft Course ID 001442 Grading Basis GRD

Repeatable for a maximum of 6 credits.

Data Analytics

DATA 200. Introduction to Data

Credits 3.00 PeopleSoft Course ID 014158 Grading Basis GRD

An interdisciplinary introduction to how data is organized, managed, visualized and analyzed across STEM disciplines. Ethical collection and use of data, with real-world test cases. Fundamentals of the tools and applications used in the analysis of data sets.

DATA 358. Introduction to Machine Learning

Credits 3.00 PeopleSoft Course ID 014159 Grading Basis GRD

This is an introductory course on machine learning with focus on regression and classification methods. The objective is to familiarize students with some basic models and algorithms for machine learning and prepare them for research or industry application of machine learning techniques. Several software libraries and publicly available datasets will be used to illustrate the application of these techniques. The emphasis will be on machine learning algorithms and application, with some broad explanation of the underlying principles. **Prerequisite(s):** *MATH 229, or MATH 220 with permission of the instructor.*

Disability Studies

DST 100. Introduction to Disability Studies

Credits 1.00 PeopleSoft Course ID 013858 Grading Basis CNC

This course is required for the disability studies minor. It provides students with an overview of the ways disability is positioned within a number of intellectual frameworks, including the political, rhetorical, social, educational, historical and legal.

Early Childhood Education

ECED 304. Diversity, Equity and Justice in Early Childhood Education

Credits 3.00 PeopleSoft Course ID 001090 Grading Basis GRD

Considers current problems and issues in early childhood education.

ECED 310. Diversity in Early Childhood Education

Credits 3.00 PeopleSoft Course ID 014144 Grading Basis GRD

This course guides students in critically examining their own perspectives regarding diversity, seeks to expand students' awareness and understanding of individuals and groups representing differences, and explores pedagogical issues and practices essential for embracing the whole community of learners and families.

ECED 372. Introduction to Early Childhood Education

Credits 3.00 PeopleSoft Course ID 010596 Grading Basis GRD

Introductory study of the role of the teacher, the role of the learner and the developing child as the basis for designing programs and developing curriculum for children 0-8 with different abilities and from various cultures.

Prerequisite(s): Admission to teacher education. **Corequisite(s):** ELED 208, ELED 271 and LED 366.

ECED 412. Natural and Social Sciences for Young Children

Credits 3.00 PeopleSoft Course ID 005716 Grading Basis GRD

Study of content, processes, teaching methods and materials for teaching science and social studies in the early childhood classroom. Knowledge of cognitive development as applied to the selection of content in method will be examined. **Prerequisite(s):** Grades of "C" or better in ELED 271, ECED 372 and LED 366; ECED 441, ECED 443, ECED 444 and LED 436. **Corequisite(s):** ECED 461.

ECED 441. Practicum in Child Development

Credits 1.00 PeopleSoft Course ID 010597 Grading Basis GRD

This course is a supervised field experience working in an early childhood laboratory classroom with pre-kindergarten age children. It emphasizes applications of age-appropriate guidance strategies for facilitating children's total development, including children with diverse needs. Observational strategies for assessing growth and progress are developed. **Prerequisite(s):** Grades of "C" or better in ELED 271, ECED 372 and LED 366; a current TB test. **Corequisite(s):** ECED 442, ECED 443 and LED 436.

ECED 442. The Young Child

Credits 3.00 PeopleSoft Course ID 010598 Grading Basis GRD

This course integrates child development knowledge and theories, academic content knowledge, and age/stage appropriate guidance strategies for teaching children pre-kindergarten through grade three. Emphasis on observational/assessment strategies and inquiry processes related to young children's growth and development as a basis for teaching decisions.

Prerequisite(s): Grades of "C" or better in ELED 271, ECED 372 and LED 366; a current TB test. **Corequisite(s):** ECED 441, ECED 443, ELED 444 and LED 436.

ECED 443. Practicum in Primary Grades

Credits 1.00 PeopleSoft Course ID 010600 Grading Basis GRD

This field experience supports the study of child development and emerging literacy through direct observation and interactions with children in a classroom setting. Candidates will examine and reflect on their personal attitudes, assumptions and behaviors toward students and their families who represent diverse class, cultural and linguistic backgrounds. Students will complete 80 hours over the course of the full semester (16 weeks). **Prerequisite(s):** Minimum grades of "C" in ECED 372 and LED 355. **Corequisite(s):** ECED 304, ECED 442, ECED 444 and LED 456.

ECED 444. Mathematics Content and Pedagogy for Early Childhood Education I

Credits 3.00 PeopleSoft Course ID 010588 Grading Basis GRD

This is the first of two courses that helps prospective early childhood teachers (PreK-3) develop mathematical content and pedagogical knowledge, skills and understanding to design and implement effective, developmentally appropriate mathematics instruction for grades PreK-3. Emphasis is on children's mathematical learning in the following mathematical strands: Number and Number Sense, Computation and Estimation, and Patterns, Functions and Algebra.

ECED 445. Mathematics Content and Pedagogy for Early Childhood Education II

Credits 3.00 PeopleSoft Course ID 014195 Grading Basis GRD

This is the second of two courses that helps prospective early childhood teachers (PreK-3) develop mathematical content and pedagogical knowledge, skills and understanding to design and implement effective, developmentally appropriate mathematics instruction for grades PreK-3. Emphasis is on children's mathematical learning of geometry, measurement, data analysis and probability. **Prerequisite(s):** ECED 444.

ECED 461. Integrated Day Practicum

Credits 1.00 PeopleSoft Course ID 010602 Grading Basis GRD

This all-day, primary-grade practicum allows students to demonstrate their educational decision-making skills through planning, implementing and evaluating appropriate activities for children of diverse interests, needs and abilities. Strategies to assess learning, guide behavior, work with professionals and involve families are applied in this practicum and accompanying seminar.

Prerequisite(s): Grades of "C" or better in ECED 372, ECED 441, ECED 442, ECED 443, LED 366, LED 436 and ECED 444, and current TB test.

ECED 480. Student Teaching ECED

Credits 8.00 PeopleSoft Course ID 009410 Grading Basis CNC

Enables students to apply in public school classrooms those understandings, skills and attitudes acquired in all components of teacher education. Under the guidance of university supervisors and cooperating teachers, students engage in full-time teaching responsibilities. **Prerequisite(s):** Teacher Ed Program Flag 03

ECED 481. Fieldwork in Family and Community

Credits 2.00 PeopleSoft Course ID 010604 Grading Basis CNC

This fieldwork is designed to provide support for students and reinforces skills and concepts learned during the education program which are being applied during student teaching. Particular attention is given to school and family/community unity. **Prerequisite(s):** Grades of "C" or better in ECED 361, ECED 372, ECED 441, ECED 442, ECED 443, ECED 454, ECED 461, LED 366, LED 436, ELED 444 and ELED 462. **Corequisite(s):** ECED 480.

ECED 490. Special Studies in Early Childhood Education

Credits 1.00 - 3.00 PeopleSoft Course ID 007866 Grading Basis GRD

Designed to give capable students opportunities to complete independent research on educational problems under faculty guidance. The plan for the

study must be presented to the department head in prescribed form for approval prior to registration.

ECED 498. Capstone in Early Childhood Education

Credits 3.00 PeopleSoft Course ID 014323 Grading Basis GRD

The teaching seminar is a space for students to reflect on their experiences, grapple with how to best meet the needs of diverse learners and contemplate their evolving identity as a teacher. Through this course, students will recognize the vital role that families and communities play in shaping and supporting children. Students will become a resource for themselves, their peers, their grade level team, their students and the families. As students transition from being a student to a professional, they will continue to develop not only their content knowledge and pedagogy, but also their skills and dispositions. **Corequisite(s): ECED 480.**

ECED 499. Honors in Early Childhood Education

Credits 1.00 PeopleSoft Course ID 010010 Grading Basis GRD

Economics

ECON 122. Introduction to an Economic Topic

Credits 1.00 PeopleSoft Course ID 014207 Grading Basis GRD

A one-week course offered during winter term or summer that introduces an economic topic/issue that is currently capturing significant interest in today's world.

ECON 200. Introduction to Macroeconomics [C4GE]

Credits 3.00 PeopleSoft Course ID 000667 Grading Basis GRD

Behavior of systems at the national and international levels. Topics include the methodology of economics as a social science, supply and demand, definition and measurement of important macroeconomic variables, and theoretical models of growth, inflation, interest rates, unemployment, business cycles, stabilization policy, exchange rates and the balance of payments. Not open to students who are enrolled in or who have received credit for ECON 332. May be used for general education credit.

ECON 200H. Introduction to Macroeconomics - Honors [C4GE]

Credits 3.00 PeopleSoft Course ID 002456 Grading Basis GRD

Behavior of systems at the national and international levels. Topics include the methodology of economics as a social science, supply and demand, definition and measurement of important macroeconomic variables, and theoretical models of growth, inflation, interest rates, unemployment, business cycles, stabilization policy, exchange rates and the balance of payments. May be used for general education credit. **Prerequisite(s): Honors Student; Not open to students who are enrolled in or who have received credit for ECON 332.**

ECON 201. Introduction to Microeconomics

Credits 3.00 PeopleSoft Course ID 003421 Grading Basis GRD

Topics covered include supply and demand, consumer choice, economics of the firm and industry, production costs, distribution theory, international trade, comparative economic systems and the philosophy of economics. Not open to students who are enrolled in or who have received credit for ECON 331.

ECON 222. Contemporary Economic Issues and Policy Alternatives

Credits 3.00 PeopleSoft Course ID 000989 Grading Basis GRD

Application of elementary economic theory to current economic issues. Special emphasis is placed on public policy alternatives. **Prerequisite(s): ECON 200 and ECON 201.**

ECON 270. International Economics

Credits 3.00 PeopleSoft Course ID 009630 Grading Basis GRD

A survey of the relationships among national economies, including trade theory, trade policy, international monetary relations and the balance of

payments. Not open to students who are enrolled in or have already received credit in ECON 370 or ECON 372. **Prerequisite(s): ECON 200 and ECON 201.**

ECON 284. Introduction to Quantitative Analysis in Economics

Credits 3.00 PeopleSoft Course ID 014213 Grading Basis GRD *Note: Does not count as COB 291 for COB 300.*

Students will learn key mathematical and statistical concepts used in economics. Topics will include algebra of summation, optimization, probability theory, joint probability distribution, conditional expectations, hypothesis testing and an introduction to data analysis using statistical software. Concepts will be emphasized using economic examples. **Prerequisite(s): MATH 205, MATH 231, MATH 235 or equivalent; and either COB 191, MATH 220, MATH 318 or equivalent.**

ECON 300. Special Topics in Economics

Credits 3.00 PeopleSoft Course ID 001147 Grading Basis GRD

Examination of special topics in theoretical or applied economics not covered in the current economics curriculum. Specific topics to be determined by the instructor. **Prerequisite(s): ECON 200 and ECON 201 or equivalent.**

ECON 302. History of Economic Thought

Credits 3.00 PeopleSoft Course ID 008183 Grading Basis GRD

Major contributions within the history of economic thought are studied in relation to both the historical circumstances within which they arose and the role each played in shaping contemporary, competing economic doctrines.

Prerequisite(s): ECON 200 and ECON 201.

ECON 305. Environmental Economics

Credits 3.00 PeopleSoft Course ID 003306 Grading Basis GRD

An analysis of the problems of the environment, their causes and alternative proposed methods of solution. Air and water pollution will be stressed as case studies of environmental problems. **Prerequisite(s): ECON 201.**

ECON 306. The Economics of Women and the Family

Credits 3.00 PeopleSoft Course ID 008188 Grading Basis GRD

Examines facts and theories pertaining to the various economic roles of women in America. The economics of marriage, divorce and childbearing are examined as are empirical and theoretical explanations of occupational and wage differentials between the sexes. **Prerequisite(s): ECON 201.**

ECON 310. Economic History of the United States

Credits 3.00 PeopleSoft Course ID 003063 Grading Basis GRD

A survey of the economic growth and development of the United States from Colonial times to the present. **Prerequisite(s): ECON 200 and ECON 201.**

ECON 312. Comparative Economic Systems

Credits 3.00 PeopleSoft Course ID 005987 Grading Basis GRD

An examination of the distinguishing characteristics, institutions and performances of the various types of major economic systems in the world today. **Prerequisite(s): ECON 200 and ECON 201.**

ECON 325. Money and Banking

Cross listed with: FIN 325

Credits 3.00 PeopleSoft Course ID 010051 Grading Basis GRD

Examines the economic role of money, banking and monetary policy within current institutional settings and under alternative theories explaining the interrelationships between money, the financial system and economic activity. **Prerequisite(s): ECON 200 and ECON 201.**

ECON 326. Public Finance

Credits 3.00 PeopleSoft Course ID 000407 Grading Basis GRD

Introduction to the field of public finance including theories and principles of taxation, government expenditure, public debt and fiscal administration. Studies interrelationships between federal, state and local finance, shifting and

incidence of tax, and the burden of public debt. **Prerequisite(s):** *ECON 200 and ECON 201.*

ECON 327. Game Theory

Credits 3.00 PeopleSoft Course ID 012950 Grading Basis GRD

Examines interdependent decision making in economics and other social sciences and covers both non-cooperative and cooperative games. Topics may include applications of game theory to industrial organization, law and economics, public choice, political economy, evolutionary biology, international affairs and theories of justice. **Prerequisite(s):** *ECON 200 and ECON 201 or permission of the instructor.*

ECON 328. Behavioral Economics

Credits 3.00 PeopleSoft Course ID 014074 Grading Basis GRD

An introductory course in behavioral economics that combines insights from psychology with economics. Using data from field and lab experiments, we will examine the explanatory power of the standard economic model and learn new frameworks that incorporate psychologically realistic assumptions grounded in observed behavior. Among the topics studied are decision-making under uncertainty, intertemporal choice and others regarding preferences. The course will conclude by examining implications this approach to economic analysis has for public policy. **Prerequisite(s):** *ECON 201.*

ECON 329. Health Economics

Credits 3.00 PeopleSoft Course ID 013689 Grading Basis GRD

This course explores the structure, conduct, and performance of hospitals, physician practices, pharmaceutical and medical device manufacturers, and long-term care facilities. The demand for healthcare and insurance is presented using economic theories of risk and uncertainty. Economic evaluation of healthcare treatments and contemporary policies are examined. **Prerequisite(s):** *ECON 200 and ECON 201.*

ECON 331. Intermediate Microeconomic Theory

Credits 3.00 PeopleSoft Course ID 006575 Grading Basis GRD

Intermediate analysis of the determination of price, resource allocation and product distribution in a free enterprise economy. **Prerequisite(s):** *Minimum grade of "C" in the following courses: ECON 200 and ECON 201; and either ECON 284, COB 291, or MATH 236.*

ECON 332. Intermediate Macroeconomic Theory

Credits 3.00 PeopleSoft Course ID 003391 Grading Basis GRD

Intermediate-level analysis of the major approaches to the determination of economic aggregates, with emphasis given to structuring a common analytic framework. **Prerequisite(s):** *Minimum grade of "C" in the following courses: ECON 200 and ECON 201; and either ECON 284, COB 291, or MATH 236.*

ECON 340. Economics of Natural Resources

Credits 3.00 PeopleSoft Course ID 006829 Grading Basis GRD

Emphasizes availability of exhaustible resources and optimum utilization rates. Examines questions of intertemporal allocation and costs of growth. **Prerequisite(s):** *ECON 200 and ECON 201.*

ECON 345. Industrial Organization

Credits 3.00 PeopleSoft Course ID 009319 Grading Basis GRD

An examination of contemporary U.S. industrial concentration both in the aggregate and within particular industries with emphasis on public policy implications. Alternative theories of the firm are considered in relation to different market structures. **Prerequisite(s):** *ECON 200 and ECON 201.*

ECON 360. Labor Economics

Credits 3.00 PeopleSoft Course ID 001162 Grading Basis GRD

Study of the economics of labor markets. Attention is given to the structure and operation of labor markets, wage determination, employment, unions, and contemporary labor problems and policies. **Prerequisite(s):** *ECON 200 and ECON 201.*

ECON 365. Economic Development

Credits 3.00 PeopleSoft Course ID 001472 Grading Basis GRD

A study of the characteristics of under-development, theories of economic development and the underlying causes for varying standards of living among the world's people. Considerable time will be spent on studying social and cultural factors that influence economic growth and their potential effect on the economic progress of the less-developed countries. **Prerequisite(s):** *ECON 200 and ECON 201.*

ECON 370. International Trade and Trade Policies

Credits 3.00 PeopleSoft Course ID 007634 Grading Basis GRD

An examination of the classical and modern theories of international trade, the effects of such trade on the domestic economy, the effects of barriers to free trade and an appraisal of U.S. commercial policy since 1948. **Prerequisite(s):** *ECON 200 and ECON 201.*

ECON 372. International Finance and Payments

Cross listed with: *FIN 372*

Credits 3.00 PeopleSoft Course ID 007108 Grading Basis GRD

Examines international financial markets, instruments and institutions; determination of spot and forward exchange rates, interest arbitrage, hedging and speculation; and alternative policies for achieving equilibrium in international payments. **Prerequisite(s):** *ECON 200 and ECON 201.*

ECON 382. Urban Economics

Credits 3.00 PeopleSoft Course ID 000364 Grading Basis GRD

A detailed examination of the economic aspects of urbanization with emphasis on metropolitan land use and location theory. Urban problems considered include housing, poverty, labor markets and municipal finances.

Prerequisite(s): *ECON 200 and ECON 201.*

ECON 384. Mathematical Economics

Credits 3.00 PeopleSoft Course ID 003661 Grading Basis GRD

Course will provide basic mathematical tools for microeconomic and macroeconomic analysis. Topics covered include linear algebra, univariate and multivariate differentiation, economic interpretation of the derivatives, constrained and unconstrained optimization, expected utility model, and dynamic analysis of economic models. **Prerequisite(s):** *Minimum grade of "C" in the following courses: ECON 200 and ECON 201; and either ECON 284, COB 291, or MATH 236.*

ECON 385. Econometrics

Credits 3.00 PeopleSoft Course ID 005064 Grading Basis GRD

Course discusses construction of models based on economic theory including identification of variables, development and testing of hypotheses for single- and multi-equation systems. **Prerequisite(s):** *Minimum grade of "C" in the following courses: ECON 200 and ECON 201; and either ECON 284, COB 291, or MATH 236.*

ECON 394. Economics Internship

Credits 3.00 PeopleSoft Course ID 000412 Grading Basis CNC

Academic credit for an approved internship experience. Registration for the course must be concurrent with the internship. An application showing how all requirements for the internship will be met must be approved prior to registration. May be taken on a credit/no credit basis only. **Prerequisite(s):** *ECON 200 and ECON 201.*

ECON 399. Career Preparation in Economics

Credits 0.00 PeopleSoft Course ID 011038 Grading Basis CNC

Students participate in a number of activities designed to enhance career preparedness and job search outcomes in economics as approved by the economics program (including attending workshops and registering to be informed of job opportunities). **Prerequisite(s):** *ECON 331, ECON 332, ECON 385 and senior standing.*

ECON 400. Advanced Topics in Economics**Credits 3.00 PeopleSoft Course ID 000915 Grading Basis GRD**

Examination of special topics in theoretical or applied economics not covered in the current economics curriculum. Specific topics to be determined by the instructor. **Prerequisite(s):** *ECON 331 and ECON 332 or permission of the instructor.*

ECON 405. Political Economy**Credits 3.00 PeopleSoft Course ID 005998 Grading Basis GRD**

Evaluation and critique of mainstream and nontraditional economic paradigms. The interaction of economics and politics in the United States as it affects the distribution of wealth and domestic and international economic policies. **Prerequisite(s):** *ECON 200, ECON 201, and junior or senior standing.*

ECON 426. Theory of Public Choice**Credits 3.00 PeopleSoft Course ID 009528 Grading Basis GRD**

Examines the justification for and nature of public sector activity in a market-based mixed economy. Emphasis is placed on theories of market failure, voting models, conditions of production and provision in the public sector, and models of bureaucratic behavior. **Prerequisite(s):** *ECON 326 or ECON 331.*

ECON 427. Experimental Economics**Credits 3.00 PeopleSoft Course ID 014600 Grading Basis GRD**

This course focuses on using incentivized experiments, whereby subjects make financially-motivated decisions in controlled environments, to identify causality, test and develop theories, and explore behavioral phenomena related to economic issues. Students will study and apply the methods and data analysis tools commonly used in experimental economics to a broad range of economic topics. Established experimental results from previous and current economic research will also be thoroughly examined. **Prerequisite(s):** *ECON 327 or ECON 331.*

ECON 430. Monetary Theory**Credits 3.00 PeopleSoft Course ID 006587 Grading Basis GRD**

Examines alternative theories of the relationships between money, interest rates, price levels, employment and output in order to assess the effectiveness of monetary policy for economic stabilization. **Prerequisite(s):** *ECON 332.*

ECON 431. Advanced Microeconomic Theory**Credits 3.00 PeopleSoft Course ID 009104 Grading Basis GRD**

Examines theories of general equilibrium and the distribution of income, welfare economics, capital theory and information theory. **Prerequisite(s):** *ECON 331 and ECON 332.*

ECON 432. Advanced Macroeconomics**Credits 3.00 PeopleSoft Course ID 007847 Grading Basis GRD**

Study of macroeconomics at an advanced level. Particular attention will be given to the theory and models of economic growth as well as the potential for policies to improve growth. Topics may also include the theory of economic fluctuations within the growth paradigm and comparative analysis of the U.S. and other economies with respect to growth. **Prerequisite(s):** *ECON 332.*

ECON 455. Economics of Regulated Industries**Credits 3.00 PeopleSoft Course ID 003588 Grading Basis GRD**

A study of the rationale, methods and impact on industry behavior of government regulations including public utility regulation and antitrust policies

relating to monopoly and competition in the United States. **Prerequisite(s):** *ECON 385 or permission of instructor; and ECON 331 or ECON 345 (to use ECON 345, students must have permission of the ECON 455 instructor).*

ECON 475. Regional Economics**Credits 3.00 PeopleSoft Course ID 006344 Grading Basis GRD**

A study of local and subnational economics viewed as integral parts of a unified system. Emphasis will be given to the basic economic forces associated with regional growth and decline and related public policy considerations.

Prerequisite(s): *ECON 200 and ECON 201.*

ECON 483. Applied Time Series Analysis**Credits 3.00 PeopleSoft Course ID 013687 Grading Basis GRD**

This is an advanced level class in Econometrics with an emphasis on time series techniques. This course covers a broad range of time series methods commonly used in research and industry for generating short-term forecasts for important economics and financial variables. Some of the topics covered are time series decomposition methods, smoothing methods, ARIMA, ARCH/GARCH and VAR. **Prerequisite(s):** *A minimum grade of "B-" in ECON 385.*

ECON 485. Advanced Econometrics**Credits 3.00 PeopleSoft Course ID 010817 Grading Basis GRD**

Theory and application of statistical techniques to study empirical relationships among economic variables. This course will cover a range of econometric techniques to estimate economic models including panel data, limited dependent variable, and simultaneous equation models. In addition, the course will cover the assembly and analysis of requisite data sets, and the preparation and presentation of empirical results. **Prerequisite(s):** *Minimum grade of "B-" in ECON 385.*

ECON 487. Economic Consulting**Credits 3.00 PeopleSoft Course ID 011182 Grading Basis GRD**

A research-oriented, senior-level course that provides students an opportunity to integrate theoretical knowledge, quantitative techniques and writing skills through research on a set of simulated consulting projects. **Prerequisite(s):** *ECON 331, ECON 332, ECON 385 and senior standing.*

ECON 488. Senior Capstone Seminar in Economics**Credits 3.00 PeopleSoft Course ID 003667 Grading Basis GRD**

This course is a writing-intensive seminar offering a student the opportunity to integrate many of his/her undergraduate studies in economics. Its substantive content will emphasize applying the methods of theoretical and empirical analyses employed by all economists. The seminar will be structured so as to contain embedded assessment measures of the learning objectives specified by the department of economics, including those related to command of basic economic theory and of quantitative methods used in quantifying empirical relationships and testing hypothesis. **Prerequisite(s):** *Senior standing and minimum grade of "C" in the following courses: ECON 331, ECON 332 and ECON 385.*

ECON 490. Special Studies in Economics**Credits 1.00 - 3.00 PeopleSoft Course ID 008380 Grading Basis GRD**

Designed to give capable students in economics an opportunity to complete independent study under faculty supervision. Admission by recommendation of the instructor and written permission of the director of economics prior to registration. May not be used toward fulfillment of the 400-level requirement for a major in economics.

ECON 499A. Honors**Credits 1.00 - 3.00 PeopleSoft Course ID 001149 Grading Basis GRD**

Year course. See catalog section "Graduation with Honors."

ECON 499B. Honors

Credits 3.00 PeopleSoft Course ID 009778 Grading Basis GRD

ECON 499C. Honors

Credits 2.00 PeopleSoft Course ID 009359 Grading Basis GRD

Education

EDUC 100. The Study of the Future: An Interdisciplinary Approach

Credits 3.00 PeopleSoft Course ID 011988 Grading Basis GRD

Introduces the students to an interdisciplinary study of the future within the context of education. Various topic areas, such as population, science/technology, lifestyle, economics, international relations, energy and religion will be explored in terms of future trends and how education responds to these trends and their impacts.

EDUC 165. Social Foundations of Exceptionalities

Credits 3.00 PeopleSoft Course ID 014124 Grading Basis GRD

This course examines the social, cultural, and educational contexts - through the lifespan - of individuals with exceptionalities. Specific focus will be given to the study of historical perspectives, models, theories, philosophies and trends in the field of special education. In addition, the role of culture, environment, family and individual differences will be explored.

EDUC 200. Foundations of Education in the United States

Credits 3.00 PeopleSoft Course ID 009147 Grading Basis GRD

This course addresses understanding of American education, philosophical approaches and their impact on education, the history of educational and socio-cultural changes in American society, and current educational issues and trends in today's schools.

EDUC 279. Comparative Intercultural Education

Credits 3.00 PeopleSoft Course ID 014622 Grading Basis GRD

Students will study and compare educational goals, practices, policies and beliefs in countries and cultures around the world. Content is grounded in social, cultural, historical and economic processes that are influenced and influence cultural understandings and systems of education. **Prerequisite(s):** EDUC 200.

EDUC 303. Foundations of Curriculum and Instruction

Credits 3.00 PeopleSoft Course ID 014115 Grading Basis GRD

This is an introductory course that examines the historical, sociological, philosophical and psychological perspectives that influence and support the curricular and instructional structures of general education. Throughout the course the implementation of those structures through a systematic process of planning for effective classroom instruction and evaluation will be examined. Connections to how they reflect an understanding of various models of learning and cognition and their implications for educational practice will be established. As part of this course students will visit and observe a variety of special education classrooms and curriculum in order to better understand how they are similar and different to general education. **Prerequisite(s):** EDUC 200 and EXED 200.

EDUC 305. Critical Studies in Education, Race, Culture and Politics

Credits 3.00 PeopleSoft Course ID 014359 Grading Basis GRD

This course engages students in critical studies of educational outcomes and practices for minority populations in contemporary and historical contexts.

EDUC 310. Teaching in a Diverse Society

Credits 3.00 PeopleSoft Course ID 010554 Grading Basis GRD

This course will examine how personal and professional values, attitudes, beliefs and behaviors affect teaching and learning. The pre-service teachers will develop an understanding of similar unique characteristics of Pre-K to 12 grade students and their families, including culture, race, ethnicity, heritage language

and learning abilities, gender socialization and sexual orientation.

Corequisite(s): MIED 211 and LED 212 for middle students.

EDUC 370. Instructional Technology

Cross listed with: LDT 370.

Credits 3.00 PeopleSoft Course ID 008184 Grading Basis GRD

In this course, learners will establish a foundational understanding of technology and media as a means to empower pedagogical practice and set conditions for learning. The course is intended to help develop awareness of, and appreciation for, a range of technical skills and reflective practices that may be applied in daily life and in future course work and careers. Learners will create an ePortfolio of digital media developed in this course.

EDUC 401. Problems in Education

Credits 1.00 - 3.00 PeopleSoft Course ID 007269 Grading Basis GRD

Workshop experiences for the development and training of teachers.

Prerequisite(s): EDUC 200 and permission of the program coordinator.

EDUC 413. Digging into History and Education at James Madison's Montpelier

Credits 3.00 PeopleSoft Course ID 014640 Grading Basis GRD

Students will learn about, reflect on and critique the ways in which systemic racism influences American society, U.S. education systems and their own lives. The course is organized to promote race reflection through critical explorations of the ways race and racism are inscribed within places and spaces. Students will critically engage with course texts and materials, unearth artifacts on an archaeological dig at Montpelier, explore numerous exhibits at Montpelier and other local historic sites in and around Orange County, Virginia, and confront structural racism while planning anti-racist K-12 curriculum. **Prerequisite(s):** Permission of instructor.

EDUC 455. Perspectives in Environmental Education

Credits 3.00 PeopleSoft Course ID 013841

This course illuminates the role of educators in presenting environmental topics in learning communities. Activities will include principles for formal classrooms and other educational settings, such as museums, parks and zoos. In a local classroom /learning environment, participants will collaborate with practicing educators to teach learners about local environmental topics.

EDUC 479. Undergraduate Teaching Assistantship in Education

Credits 2.00 PeopleSoft Course ID 014547 Grading Basis GRD

Undergraduate students in education majors will serve as teaching assistants in large-format education courses. Students will perform essential duties, including facilitating classroom discussions, maintaining accurate class records and assisting the instructor with class lectures. **Prerequisite(s):** EDUC 200.

EDUC 480. Student Teaching

Credits 6.00 - 12.00 PeopleSoft Course ID 000261 Grading Basis CNC

Enables students to apply, in the public school classrooms and the comprehensive child development programs, those skills and attitudes acquired in all components of teacher education. Under the guidance of university supervisors, students are provided activities designed to familiarize them with the classroom teacher's role. **Prerequisite(s):** PSYC 160, EDUC 200 or EDUC 360, appropriate methods courses, and permission of the coordinator of field experiences.

EDUC 482. Professional Development, Partnership and Advocacy

Credits 1.00 - 3.00 PeopleSoft Course ID 012702 Grading Basis GRD

Students examine opportunities for professional development from professional associations, universities and other organizations across K-16. Strategies to build partnerships with colleagues, families and communities are presented. Important social and political issues affecting education of majority and minority students and models of advocacy for students and their families are presented.

EDUC 490. Special Topics in Education

Credits 1.00 - 4.00 PeopleSoft Course ID 009861 Grading Basis GRD

In-depth examination of selected topics which are of current importance in the field of education. Offered only with approval of School of Education director.

May be repeated for credit when course content changes. **Prerequisite(s):** *At least junior standing and consent of the instructor.*

EDUC 499 A, B, C. Honors

Credits 1.00 - 6.00 PeopleSoft Course ID 008004 Grading Basis GRD

Independent research topic initiated and completed by qualified upper-division students. See catalog descriptions entitled "Graduation with Distinction" and "Graduation with Honors."

Elementary Education

ELED 208. Child Development: Birth Through Adolescence

Credits 3.00 PeopleSoft Course ID 011628 Grading Basis GRD

Skills for observing, recording and interpreting the behavior of children ages three through 12 will be developed so that adult intervention and guidance is appropriate and meaningful. **Corequisite(s):** *ECED 372 and ELED 271.*

ELED 271. Practicum in Early and Elementary Education

Credits 1.00-2.00 PeopleSoft Course ID 010595 Grading Basis GRD

Field experiences in grades PK-6 will provide for extensive observation and experience with learners in elementary classrooms and the opportunity to assist teachers in daily activities. Through direct observation and interactions with children in classroom settings, candidates will examine and reflect on how children develop and learn, exploring their own personal attitudes, assumptions and behaviors towards students and their families are influenced by class, cultural and linguistic backgrounds. **Corequisite(s):**

ELED 272.

ELED 272. Introduction to Early and Elementary Education

Credits 3.00 PeopleSoft Course ID 014196 Grading Basis GRD

This course is designed to introduce elementary education students to teaching children in grades PK-6. Based on developmental and learning theories, the course focuses on building relationships with and among learners, establishing learning environments, guiding behavior, and providing instruction and assessment. Through observations and participation in practicum, seminars, workshops and lectures, students will construct an understanding of how teachers meet the developmental and learning needs of children by planning, implementing and assessing appropriate curriculum and instruction.

Corequisite(s): *ELED 271.*

ELED 310. Diversity in Elementary Education

Credits 3.00 PeopleSoft Course ID 011630 Grading Basis GRD

This course will examine how personal and professional values, attitudes, beliefs and behaviors affect teaching and learning. The pre-service teachers will develop an understanding of unique characteristics of Pre-K to 12th grade students and their families, including culture, race, ethnicity, heritage, language, learning abilities, gender socialization and sexual orientation.

Prerequisite(s): *Admission to teacher education.* **Corequisite(s):** *ECED 372, ELED 208, ELED 321 and LED 366.*

ELED 321. Practicum with a Focus on Learners and Learning

Credits 1.00-3.00 PeopleSoft Course ID 011631 Grading Basis GRD

This field experience, taken in the fall of junior year, provides candidates with a classroom of students and a mentor teacher with whom to practice building relationships with learners and conduct extensive observations of learners and learning, as well as practice the teaching of content related to their concurrent methods courses (either language arts, mathematics and science OR language arts, mathematics and social studies) with small groups of students.

Accompanying monthly seminars will focus on reflecting on themes and experiences in the field and making content connections to methods courses.

Prerequisite(s): *Admission to teacher education.*

ELED 322. Practicum with a Focus on Curriculum Integration and Guiding Behavior

Credits 1.00-3.00 PeopleSoft Course ID 011632 Grading Basis GRD

This field experience, taken in the spring of junior year, provides candidates with a classroom of students and a mentor teacher with whom to practice the teaching of content related to their concurrent methods courses (either language arts, mathematics and science OR language arts, mathematics and social studies) with small groups of students as well as in full class contexts. The accompanying monthly seminar explores the integration and construction of meaningful curriculum in elementary education contexts and in classroom management as well as reflection along with field-based partners.

Prerequisite(s): *Admission to teacher education.*

ELED 332. Children and Science

Credits 3.00 PeopleSoft Course ID 011633 Grading Basis GRD

This course is a study of content, processes, pedagogy and materials for teaching science in the elementary classroom. Knowledge of cognitive development as applied to the selection of content and methodology for elementary learners will be examined. **Prerequisite(s):** *ELED 208, ECED 372, ELED 310, ELED 321 and LED 366.*

ELED 333. Children and Mathematics I

Credits 3.00 PeopleSoft Course ID 014179 Grading Basis GRD

The first of two courses that provides students with knowledge, skills and understanding to design and implement effective, developmentally appropriate mathematics instruction for grades PreK-6. This course will focus on mathematical instruction connected the following mathematical strands: Number and number sense, computation and estimation, and patterns, functions and algebra.

ELED 334. Children and Social Studies

Credits 3.00 PeopleSoft Course ID 011635 Grading Basis GRD

This course focuses on the content, processes, pedagogy and materials for teaching social studies in the elementary classroom. Knowledge of cognitive development as applied to the selection of content, methods, materials and strategies for organizing the learning environment for elementary learners will be examined. **Prerequisite(s):** *Admission to Teacher Education, ELED 208* **Corequisite(s):** *ELED 322, ELED 332, ELED 433 and LED 436.*

ELED 343. Children and Mathematics II

Credits 3.00 PeopleSoft Course ID 014125 Grading Basis GRD

This is the second course in a series providing students with knowledge, skills and understanding to design and implement effective, developmentally appropriate mathematics instruction for grades PreK-6. Emphasis is on children's mathematical learning about geometry, measurement, data analysis and probability.

ELED 400. Elementary Education Final Practicum

Credits 1.00 PeopleSoft Course ID 014358 Grading Basis GRD

Upon completion of this course, teacher candidates will be able to build upon the unique strengths and contributions of K-6 students in order to create and teach lessons in various subject areas as well as reflect on that process.

Prerequisite(s): *ELED 321 and ELED 322.*

ELED 433. Children and Mathematics: Number, Operations, Algebraic and Geometric Reasoning

Credits 3.00 PeopleSoft Course ID 011634 Grading Basis GRD

The first of two courses that provides students with knowledge, skills and understanding of design and implementation for effective, developmentally appropriate mathematics instruction for grades PreK-6. Emphasis is on children's mathematical learning and pre-numerical stages through the acquisition of advanced numerical processes and operations and connections to geometric and algebraic reasoning. **Prerequisite(s):** *MATH 107, MATH 108, MATH 207 and LED 366.* **Corequisite(s):** *LED 436, ELED 322, ELED 332 and ELED 334.*

ELED 443. Children and Mathematics II

Credits 3.00 PeopleSoft Course ID 014125 Grading Basis GRD

The second of two courses that provides students with knowledge, skills, and understanding to design and implement effective, developmentally appropriate mathematics instruction for grades PreK-6. Emphasis is on children's mathematical learning about geometry, measurement, data analysis and probability. **Prerequisite(s):** *MATH 108.* **Corequisite(s):** *ELED 332.*

ELED 450. Planning Instruction and Assessment

Credits 3.00 PeopleSoft Course ID 014126 Grading Basis GRD

Elementary education teacher candidates will learn the process of planning, implementing curriculum and using instructional strategies and assessments that promote and monitor students' understanding of content beyond memorization. Students will design units of instruction that utilize evidence-based practices for active engagement strategies, specifically for providing an inclusive environment for a diverse student population. Students will gain the knowledge and skills necessary to use assessments that allow for data-driven instructional decisions and inform subsequent teaching and learning.

Prerequisite(s): *ELED 332, ELED 333, ELED 334, and ELED 343.*

ELED 455. Home, School, Communities

Credits 3.00 PeopleSoft Course ID 014127 Grading Basis GRD

Study of the role of the teacher in relating to and working with families, school personnel and communities. Methods of involving stakeholders and providing effective communication among groups are emphasized. Resources for supporting parents and engaging community stakeholders are examined.

Prerequisite(s): *ELED 322.*

ELED 480. Student Teaching in Elementary Education

Credits 8.00 PeopleSoft Course ID 014128 Grading Basis CNC

This internship provides a context in which to demonstrate and integrate the skills, knowledge and dispositions that are essential for success as an elementary classroom teacher. Under the guidance of a university supervisor, students are expected to reflect on the teaching role as they assume the full responsibilities of a teacher in grades PreK-6. Students majoring in elementary education must complete this course twice for a total of 16 credit hours.

Prerequisite(s): *ELED 321 and ELED 322.*

ELED 485. Guiding Student Behavior: Responsive Classroom Management

Credits 3.00 PeopleSoft Course ID 014371 Grading Basis GRD

This course presents an overview to classroom management for the early childhood and elementary classroom teacher. It includes an historical look at the guidance tradition, a review of traditional approaches to classroom management and a focus away from punishment toward proactive strategies. Best practices in classroom management will be presented from an inclusive perspective for teachers of all children. **Prerequisite(s):** *ELED 322.*

ELED 490. Special Studies in Elementary Education

Credits 1.00 - 3.00 PeopleSoft Course ID 012382 Grading Basis GRD

Designed to give students opportunities to complete independent research on educational problems under faculty guidance. The plan for the study must be

presented to the department head in prescribed form for approval prior to registration. **Prerequisite(s):** *Teacher Ed Program 02 Flag*

Engineering

ENGR 101. Engineering Opportunities

Credits 1.00 PeopleSoft Course ID 012474 Grading Basis GRD

This is the introductory course in the engineering curriculum. In this course, students work in teams to identify problems in order to create opportunities for the betterment of society using a design process. Students are introduced to the Madison engineering values and curriculum, and they have opportunities to relate them to personal and academic goals. Techniques and tools for developing a professional identity will be shared. The activities in the course are aimed at assisting students in successfully making the transition from high school to college.

ENGR 112. Engineering Decisions

Credits 3.00 PeopleSoft Course ID 012262 Grading Basis GRD

This course focuses on teaching first year engineering students the processes associated with making evidence-based decisions in engineering fields. This experiential course covers the following topics: processes of decision making, engineering documentation, data analysis using MATLAB, visualization and engineering orthographic drawing using SolidWorks.

ENGR 212. Statics and Dynamics (3,1)

Credits 4.00 PeopleSoft Course ID 012263 Grading Basis GRD

This course provides the fundamental and governing principles of particles and rigid bodies for the analysis of these structures. Topics include equilibrium of particles and rigid bodies, force and moment vectors, kinematics, and dynamics of particles, work and energy. An included laboratory component provides reinforcement of course material through experiments. **Prerequisite(s):** *Grade of "C" or better in ENGR 112; grade of "C-" or better in each of PHYS 240, PHYS 240L and MATH 237.*

ENGR 221. Engineering Management I: Product Development and Entrepreneurial Engineering

Credits 3.00 PeopleSoft Course ID 012264 Grading Basis GRD

This course provides the fundamental and governing principles of management of technology including general business functions of management, marketing, finance, accounting and operations; system analysis skills; and an introduction to project management. Students develop an understanding and appreciation for the importance of technology and innovation in organizations.

Prerequisite(s): *Grade of "C" or better in ENGR 112 and ENGR 231.*

Corequisite(s): *ENGR 232.*

ENGR 231. Engineering Design I

Credits 2.00 PeopleSoft Course ID 012265 Grading Basis GRD

This course provides students with an overview of the engineering design process with a focus on early phase design including: understanding and detailing customer requirements, exploring the engineering solution space and down-selecting conceptual design solutions. This course includes significant team and project-based components and provides an introduction to interpersonal communication skills that lead to effective problem solving, idea generation and decision making. **Prerequisite(s):** *Grade of "C" or better in ENGR 112, grade of "C-" or better in MATH 236.* **Corequisites:** *PHYS 240 and PHYS 240L.*

ENGR 232. Engineering Design II

Credits 2.00 PeopleSoft Course ID 012266 Grading Basis GRD

This course provides students with an overview of the engineering design process with a focus on late phase design including: embodiment, modeling and prototyping, and testing and refinement of design solutions. This course

includes significant team and project-based components and provides an introduction to interpersonal communication skills that lead to effective problem solving, design embodiment and decision making. **Prerequisite(s):** *Grade of "C" or better in ENGR 231.*

ENGR 280. Projects in Engineering

Credits 1.00 – 4.00 PeopleSoft Course ID 012364 Grading Basis GRD

Research projects, design projects, or special topics in engineering which are of interest to the lower-division student. May be repeated for credit when course content changes. Projects or topics selected may dictate prerequisites. Students should consult the instructor prior to enrolling in the course.

Prerequisite(s): *Permission of the instructor.*

ENGR 301. Engineering Bridge Course for Transfer Students

Credits 3.00 PeopleSoft Course ID 012526 Grading Basis GRD

This course provides transfer students with an introduction to the JMU engineering program. The purpose is to familiarize our students with our curriculum and sustainability vision. The course will also provide design instruction while introducing transfer students to the specific software tools and machine tools they will use over the remainder of their curriculum.

Prerequisite(s): *Permission of the instructor.*

ENGR 311. Fluid Mechanics

Credits 4.00 PeopleSoft Course ID 012475 Grading Basis GRD

This course focuses on principles applicable to fluid mechanics. Coverage includes fluid statics as well as the principles of internal and external flows. Wide-ranging applications of these principles to fluid systems across engineering disciplines are emphasized. Reinforcement of course material is provided through experiential learning opportunities and in-depth problem solving. **Prerequisite(s):** *Admission to engineering major.*

ENGR 312. Thermodynamics and Heat Transfer

Credits 4.00 PeopleSoft Course ID 012476 Grading Basis GRD

This course focuses on the fundamental principles of thermodynamics and heat transfer in engineering systems. It builds on mass, energy, and momentum balance concepts covered in ENGR 311 and incorporates the laws of thermodynamics in addition to the basic mechanisms of 1-dimensional heat transfer. Application to thermal-fluid systems across engineering disciplines is emphasized and reinforcement of course material is provided through experiential learning opportunities and in-depth problem solving.

Prerequisite(s): *Grade of "C" or better in ENGR 311.*

ENGR 313. Circuits and Instrumentation

Credits 4.00 PeopleSoft Course ID 012477 Grading Basis GRD

This course presents the fundamentals of circuit analysis and the measurement of physical phenomena. Circuit analysis topics include Kirchhoff's laws, 1st and 2nd order circuits, and AC systems. Instrumentation principles and common measurement devices are discussed. Laboratory investigations provide exposure to common electronic measurement equipment and experience with electronic design and prototyping. **Prerequisite(s):** *Admission to engineering major.*

ENGR 314. Materials and Mechanics

Credits 4.00 PeopleSoft Course ID 012478 Grading Basis GRD

This course explores the fundamentals of materials science, materials engineering and mechanics of materials. Topics include process-structure-property relationships, crystalline structures, mechanical properties, strength of materials and an introduction to materials processing. An included laboratory component provides reinforcement of course material through experiments.

Prerequisite(s): *Admission to engineering major.*

ENGR 322. Engineering Management II: Engineering Project Management

Credits 3.00 PeopleSoft Course ID 012527 Grading Basis GRD

This course provides the fundamentals of project management. Students will identify project requirements, develop a work breakdown structure and network diagram, and apply resources to develop a project schedule. Knowledge is demonstrated through proper application of the decision tools available to project managers, such as determining a project's current status for cost, schedule, and performance. Students will analyze why a project's current status is not according to plan, develop an action plan to resolve cost and scheduling challenges, and project final cost, completion date, and performance. A computer-based project management system is used for managing projects. Completion of this course fulfills the requirement for 23 formal education hours for the Certified Associate in Project Management (CAPM) eligibility. **Prerequisite(s):** *Admission to the engineering major.*

Corequisite(s): *ENGR 331.*

ENGR 331. Engineering Design III

Credits 3.00 PeopleSoft Course ID 012479 Grading Basis GRD

This course emphasizes methods and practice in problem discovery, contextualization, stakeholder analysis, requirement and constraint identification, and design codes and standards. Application of course content occurs within the context of the first semester of a four-semester project experience. **Prerequisite(s):** *Admission to engineering major.* **Corequisite(s):** *ENGR 322.*

ENGR 332. Engineering Design IV

Credits 3.00 PeopleSoft Course ID 012480 Grading Basis GRD

This course emphasizes advanced design concept generation, concept selection and tradeoff analysis methods. Application of course content occurs within the context of the second semester of a four-semester project experience. **Prerequisite(s):** *Grade of "C" or better in ENGR 331.*

ENGR 411. Fundamentals of Sustainable Engineering and Design

Credits 3.00 PeopleSoft Course ID 012481 Grading Basis GRD

This course is the first in a two-course sequence that provides a foundation in evaluating sustainable design and engineered systems. This course focuses on environmental systems and single factor analysis of common indicators of sustainability. The material presented supports an understanding of the environmental, social and economic impacts of design and technology.

Prerequisite(s): *CHEM 132.*

ENGR 412. Sustainable Engineering and Design II

Credits 3.00 PeopleSoft Course ID 012482 Grading Basis GRD

This course is the second in a two-course sequence that provides a foundation in evaluating sustainable design and engineered systems. This course focuses on industrial design and systems and multi-factor analysis of common indicators of sustainability. The material presented furthers the understanding of the environmental, social and economic impacts of design and technology.

Prerequisite(s): *ENGR 411.*

ENGR 413. Systems Analysis

Credits 3.00 PeopleSoft Course ID 013069 Grading Basis GRD

This course focuses on the concepts of systems thinking and analysis for complex engineered systems. Students will develop basic knowledge and tools to identify a system, decompose it into parts, define interactions, perform analysis and apply control measures if necessary. Application of computational tools and mathematical modeling will be emphasized. **Corequisite(s):** *ENGR 431.*

ENGR 431. Engineering Design V

Credits 3.00 PeopleSoft Course ID 012483 Grading Basis GRD

Course instruction focuses on tools and techniques for design embodiment, testing and refinement. Application of course content occurs within the context of the third semester of a four-semester project experience. **Prerequisite(s):** *Grade of "C-" or better in ENGR 332.*

ENGR 432. Engineering Design VI

Credits 3.00 PeopleSoft Course ID 012484 Grading Basis GRD

Course instruction focuses on reliability and final design communication and presentation. Application of course content occurs within the context of the fourth semester of a four-semester project experience. **Prerequisite(s):** *Grade of "C-" or better in ENGR 431.*

ENGR 440. Mechatronics

Credits 3.00 PeopleSoft Course ID 013917 Grading Basis GRD

Mechatronics is the synergetic integration of mechanical, electrical, computer and control systems to create intelligent systems. This course explores mechatronics with an emphasis on sensors and automation. Students will learn and apply theoretical and practical knowledge of how sensors work and interface with systems to enable automation. Additional topics covered include industrial controller programming, actuators, signal conditioning and interface circuits, and industrial robotics. **Prerequisite(s):** *ENGR 313 or approval of the instructor.*

ENGR 445. Embedded System Design

Credits 3.00 PeopleSoft Course ID 014549 Grading Basis GRD

This project-based course will prepare students to design novel computing systems that involve sensing, actuation and networking. Various topics will be covered including component selection, microprocessor peripheral interfaces, energy efficiency and power-aware design, and wireless communication methods. Students will design, test and fabricate their own embedded computing system to collect and analyze biometric data. **Prerequisite(s):** *Admission to the engineering major or permission of instructor.*

ENGR 449A. Honors Engineering Design IV

Credits 2.00 PeopleSoft Course ID 012745 Grading Basis GRD

This course is fourth in the six-course 10-credit developmental design sequence and first in the three-course 6-credit Honors Capstone project. This project-based course provides instruction in 1) Holistic design principles 2) Aesthetics and human interface in design, 3) Structured and unstructured problem solving, 4) Collaborative design, 5) Writing and communications, 6) Product modeling and Analytical prototyping.

ENGR 450. Structural Analysis

Credits 3.00 PeopleSoft Course ID 014381 Grading Basis GRD

This course extends from topics introduced in statics and mechanics into structural engineering analysis, design and construction. Topics include analysis of statically determinate and indeterminate structures by consistent deformation; drawing load, shear, moment, and deflected shape diagrams for beams and frames; and calculating deformations using hand- and computer-methods. **Prerequisite(s):** *Grade of "C" or better in ENGR 314.*

ENGR 460. Solid Mechanics

Credits 3.00 PeopleSoft Course ID 013964 Grading Basis GRD

This course introduces fundamentals of solid mechanics including stress elements and Mohr's circle for stress and strain. This course also introduces related design concepts including stress concentrations and comparison of stress values to failure criteria. The course is enhanced by a laboratory component that is focused on strain gage installation and application.

Prerequisite(s): *ENGR 314.*

ENGR 471. Water in Africa

Credits 3.00 PeopleSoft Course ID 013318 Grading Basis GRD

This course has a three-part focus: cross cultural training, promoting health in developing countries and using appropriate technologies for eradicating water-related illnesses. Project teams use course content as the foundation for developing and implementing service projects. This course is a service-learning course and addresses issues of access to water in West Africa.

ENGR 472. Environmental Engineering

Credits 3.00 PeopleSoft Course ID 012485 Grading Basis GRD

This course is for engineering and environmental science students interested in environmental engineering. Water, wastewater and air treatment are emphasized. Students must be proficient in mathematics, chemistry and thermal sciences. Quantitative relationships are derived for characterizing water quality, designing biological and physical treatment processes, and modeling environmental systems. Systems are described by mass and energy balances that relate pollutant removal efficiency to process input parameters.

Prerequisite(s): *CHEM 132 and MATH 236.*

ENGR 476. Principles of Process Engineering

Credits 3.00 PeopleSoft Course ID 013163 Grading Basis GRD

This course will introduce basic principles and techniques used in process engineering. The major emphasis is on understanding materials and energy flows in simple and complex process systems. Quantitative models and equilibrium concepts will be developed and applied to assess product quality, economics, safety and environmental issues. This course should be of interest to students looking toward a career or graduate studies in chemical, environmental, biochemical, petrochemical and manufacturing engineering.

ENGR 478. Water Resources Engineering

Credits 3.00 PeopleSoft Course ID 013164 Grading Basis GRD

This course will provide an introduction to basic engineering principles used in both water supply management and water excess management. Hydrologic and hydraulic processes will be investigated using the fundamentals of fluid mechanics. Specific emphasis will be placed on water sources flows, distribution and control. **Prerequisite(s):** *ENGR 311.*

ENGR 480. Advanced Projects in Engineering

Credits 1.00 - 4.00 PeopleSoft Course ID 012410 Grading Basis GRD

Research projects, design projects or special topics in engineering which are of interest to the upper-division student. May be repeated for credit when course content changes. Projects or topics selected may dictate prerequisites. Students should consult the instructor prior to enrolling in the course.

Prerequisite(s): *Permission of the instructor.*

ENGR 490. Engineering for Sustainable Development

Credits 1.00 - 6.00 PeopleSoft Course ID 013702 Grading Basis GRD

This course is designed to provide students with the opportunity to explore engineering challenges and solutions occurring in international settings. It provides technical elective credit for academically-grounded, interdisciplinary engineering project work. Students seeking credit must secure the approval of the department head and a faculty supervisor who will provide the academic structure, assignments and student evaluation. Students may earn up to 6 credits in this course.

ENGR 498. Advanced Topics in Engineering

Credits 1.00-3.00 PeopleSoft Course ID 013398 Grading Basis GRD

This course is designed to provide upper-division students with the opportunity to explore engineering topics in greater depth. The specific topic of interest may dictate prerequisites. Students should consult the instructor prior to enrolling in the course.

ENGR 498H. Advanced Topics in Engineering Honors

Credits 3.00 PeopleSoft Course ID 013777 Grading Basis GRD

This course is designed to provide upper-division students with the opportunity to explore engineering topics in greater depth. The specific topic of interest may dictate prerequisites. Students should consult the instructor prior to enrolling in the course.

ENGR 499A. Engineering Honors I

Credits 1.00 PeopleSoft Course ID 012979 Grading Basis GRD

First course in a three-course sequence. Student generates an idea for and writes a proposal for an independent research project that meets the requirements set forth by the Honors program and the Department of Engineering. Student must identify and analyze an engineering-based problem, identify potential solutions, recommend an approach and prepare a written proposal.

ENGR 499B. Honors Engineering Design II

Credits 1.00 - 3.00 PeopleSoft Course ID 013575 Grading Basis GRD

Second course in a three-course sequence. Student completes the research for and prepares an oral and written presentation of their results for an independent research project that meets the requirements set forth by the Honors program and the Department of Engineering. Student completes and presents (in written and oral form) the project described in his or her proposal from ENGR 499A. **Prerequisite(s):** ENGR 499A or permission of the engineering honors director/department head.

ENGR 499C. Honors Engineering Design III

Credits 2.00 PeopleSoft Course ID 013576 Grading Basis GRD

Third course in a three-course sequence. Student completes the research for and prepares an oral and written presentation of their results for an independent research project that meets the requirements set forth by the Honors program and the Department of Engineering. Student completes and presents (in written and oral form) the project described in his or her proposal from ENGR 499A. **Prerequisite(s):** ENGR 499B.

English

ENG 221. Literature/Culture/Ideas [C2L]

Cross listed with:

Credits 3.00 PeopleSoft Course ID 012906 Grading Basis GRD

This course will take a thematic approach to literature by examining multiple literary texts that engage with a common course theme concerned with the human experience. Themes address cultural, political, social, religious or philosophical aspect ideas through literature. Specific topics will vary. May be used for general education credit.

ENG 222. Genre(s) [C2L]

Credits 3.00 PeopleSoft Course ID 012690 Grading Basis GRD

An examination of representative works in a literary genre, in a set of related literary subgenres, or in both a literary genre and one or more closely connected genres in other humanities disciplines. May be used for general education credit.

ENG 235. Survey of English Literature: From Beowulf to the Eighteenth Century [C2L]

Credits 3.00 PeopleSoft Course ID 007730 Grading Basis GRD

A general survey presented chronologically. May be used for general education credit.

ENG 236. Survey of English Literature: Eighteenth Century to Modern [C2L]

Credits 3.00 PeopleSoft Course ID 007969 Grading Basis GRD

A general survey presented chronologically. May be used for general education credit.

ENG 239. Studies in World Literature [C2L]

Credits 3.00 PeopleSoft Course ID 008003 Grading Basis GRD

Introduction to masterpieces of world literature with emphasis on nonWestern literature. (May be focused regionally or topically). May be used for general education credit.

ENG 247. Survey of American Literature: From the Beginning to the Civil War [C2L]

Credits 3.00 PeopleSoft Course ID 001899 Grading Basis GRD

A general survey presented chronologically. May be used for general education credit.

ENG 248. Survey of American Literature: From the Civil War to the Modern Period [C2L]

Credits 3.00 PeopleSoft Course ID 008379 Grading Basis GRD

A general survey presented chronologically. May be used for general education credit.

ENG 260. Survey of African American Literature [C2L]

Credits 3.00 PeopleSoft Course ID 008811 Grading Basis GRD

Survey of literature by African American authors from the 18th century to the present. May be used for general education credit.

ENG 294. Internship in English

Credits 1.00 - 3.00 PeopleSoft Course ID 010708 Grading Basis GRD

Provides English majors with work experience in career fields they are interested in pursuing. A journal, internship report, research paper, bibliography and evaluation from the intern provider are required. Does not count as an English elective. **Prerequisite(s):** Major or minor status and approval of the internship director.

ENG 299. Writing About Literature

Credits 3.00 PeopleSoft Course ID 010609 Grading Basis GRD

This course will provide students with the skills and knowledge necessary for interpreting, researching and writing about literature. Students will learn basic literary terms, acquire an understanding of canon formation and transformation, and gain a knowledge of literary theories. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** Declared English major or minor; or Liberal Studies minor; or permission of instructor.

ENG 301. Old English Language and Literature

Credits 3.00 PeopleSoft Course ID 006011 Grading Basis GRD

An introduction to the Old English language through selected readings in poetry and prose.

ENG 302. Special Topics in Literature and Language

Credits 3.00 PeopleSoft Course ID 005853 Grading Basis GRD

Study of a particular literary or linguistics topic. May be repeated for credit when course content changes but not more than once, except with the approval of the department head.

ENG 302F. Florence in Literature [C2L]

Credits 3.00 PeopleSoft Course ID 004900 Grading Basis GRD

ENG 302L. U.S. Writers in London

Credits 3.00 PeopleSoft Course ID 010131 Grading Basis OPT

ENG 303. History of the English Language

Credits 3.00 PeopleSoft Course ID 004208 Grading Basis GRD

Introduction to the historical study of English including its Indo-European origins. May be repeated for credit when course content changes.

ENG 305. Mythology

Credits 3.00 PeopleSoft Course ID 002868 Grading Basis GRD

Study of the nature and meaning of myths specific to a particular culture or comparative myths as interpreted and reinterpreted in significant works of ancient and modern literature.

ENG 306. The Bible as Literature

Credits 3.00 PeopleSoft Course ID 003463 Grading Basis GRD

Study of Hebrew and Christian scripture as literary and cultural texts, which have influenced subsequent literature and culture.

ENG 307. Literature and Ideas

Credits 3.00 PeopleSoft Course ID 008518 Grading Basis GRD

Literary treatment of an organizing theme or approach appropriate to the 300-level. The topic may be framed as part of the human experience or within a tradition of studies in the humanities. Course content may include pertinent readings from other disciplines. Possible topics: Disease in literature, literature and the law, literature and psychology. May be repeated as course topic changes.

ENG 308. Introduction to Linguistics

Credits 3.00 PeopleSoft Course ID 005886 Grading Basis GRD

Introduction to the study of the various subfields of linguistics, including questions about the nature and use of language in general, with the English language as the primary example. Formerly ENG 418.

ENG 309. Traditional English Grammar

Credits 3.00 PeopleSoft Course ID 001661 Grading Basis GRD

Introduction to traditional grammar, probing its logic, system and history, with an examination of modern applications of conventional rules.

ENG 310. Modern English Grammar

Credits 3.00 PeopleSoft Course ID 008614 Grading Basis GRD

Introduction to modern English grammar with attention to the structure of the English language from a modern linguistic perspective.

ENG 311. Medieval Literature and Culture

Credits 3.00 PeopleSoft Course ID 006783 Grading Basis GRD

Studies in the literature and culture of the Middle Ages through selected Old English, Norse/Icelandic, Middle English, Old Irish, French, German, Latin and Arabic texts in translation.

ENG 313. Studies in Early Modern Literature and Culture

Credits 3.00 PeopleSoft Course ID 006267 Grading Basis GRD

Students will study non-dramatic poetry and prose produced in England during the sixteenth century and roughly the first half of the seventeenth century.

ENG 316. Early Modern Drama

Credits 3.00 PeopleSoft Course ID 001030 Grading Basis GRD

Major works of British dramatists, excluding Shakespeare, from 1550-1660.

ENG 317. Studies in Shakespeare

Credits 3.00 PeopleSoft Course ID 003696 Grading Basis GRD

Students will study selected dramas by Shakespeare; nondramatic work may be considered.

ENG 319. Teaching Shakespeare

Credits 3.00 PeopleSoft Course ID 012934 Grading Basis GRD

A study of Shakespeare's plays, with emphasis on pedagogical techniques for teaching drama in the classroom.

ENG 320L. Shakespeare on the Page and Stage in London

Credits 3.00 PeopleSoft Course ID 000767 Grading Basis GRD

Students will study the plays of Shakespeare currently in production in London and England with special emphasis on the productions of the Royal Shakespeare Company and the National Theatre. Course can be substituted for ENG 317 but may not be taken for credit in addition.

ENG 321. Restoration and Eighteenth Century British Prose and Poetry

Credits 3.00 PeopleSoft Course ID 004166 Grading Basis GRD

A study of the poetry and prose (other than the novel) from the Age of Satire, including works by Dryden, Swift, Pope and Johnson.

ENG 322. Restoration and Eighteenth Century British Drama

Credits 3.00 PeopleSoft Course ID 006563 Grading Basis GRD

A study of British drama in the eighteenth century.

ENG 325. Romantic Literature

Credits 3.00 PeopleSoft Course ID 005118 Grading Basis GRD

A study emphasizing selected works of Romantic literature. Attention given to critical theories, intellectual and cultural movements, or poetic forms.

ENG 327. Gothic Literature

Credits 3.00 PeopleSoft Course ID 000746 Grading Basis GRD

A study of the origins, influence and transformations of Gothic fiction from the 18th century to the present.

ENG 329. Victorian Literature

Credits 3.00 PeopleSoft Course ID 008251 Grading Basis GRD

Study of British literature of the Victorian period with primary emphasis on poetry and nonfiction prose.

ENG 330. Nineteenth Century British Novel

Credits 3.00 PeopleSoft Course ID 009729 Grading Basis GRD

The development of the British novel in the nineteenth century and the study of representative works.

ENG 331. Studies in Poetry

Credits 3.00 PeopleSoft Course ID 009563 Grading Basis GRD

A study of select poetic works. Specific time periods of genres studied may vary. Course may be repeated as topic changes.

ENG 332. Studies in Popular Genres

Credits 3.00 PeopleSoft Course ID 013954 Grading Basis GRD

A study of a select popular or specialized genre, such as speculative fiction, detective fiction or the graphic novel. Course may be repeated as topic changes.

ENG 334. Contemporary Drama

Credits 3.00 PeopleSoft Course ID 003482 Grading Basis GRD

Drama from 1960 to the present.

ENG 335. Studies in Children's Literature

Credits 3.00 PeopleSoft Course ID 014214 Grading Basis GRD

A study of children's literature, such as a survey of children's literature, young adult literature, African American children's literature, children's fantasy fiction or the picture book, or a study of a particular author or series. Course may be repeated as topic changes.

ENG 340. Modern British and Irish Literature

Credits 3.00 PeopleSoft Course ID 004400 Grading Basis GRD

Literature from Britain and Ireland, 1900 to 1945.

ENG 341. Contemporary British and Irish Literature

Credits 3.00 PeopleSoft Course ID 000536 Grading Basis GRD

Literature from Britain and Ireland, from 1945 to the present.

ENG 342. Early American Literature

Credits 3.00 PeopleSoft Course ID 005646 Grading Basis GRD

Significant genres, writers and literary movements of the seventeenth and eighteenth centuries.

ENG 343. Antebellum American Literature

Credits 3.00 PeopleSoft Course ID 008278 Grading Basis GRD

American Literature of the early nineteenth century.

ENG 344. Late Nineteenth Century American Literature

Credits 3.00 PeopleSoft Course ID 006469 Grading Basis GRD

American literature of the late nineteenth century.

ENG 347. Playwriting

Credits 3.00 PeopleSoft Course ID 000431 Grading Basis GRD

Study of the process of writing plays. Consideration of plot, character, thematic material, conflict and dramatic structure. Emphasis on individual writing assignments. **Prerequisite(s):** *Sophomore standing or permission of the instructor.*

ENG 348. Studies in Linguistics and the English Language

Credits 3.00 PeopleSoft Course ID 013916 Grading Basis GRD

Broad study of a particular subfield of linguistics, focusing on the English language, or an application of various linguistic theories and methodologies to the study of literature. Some possible areas of study include semantics, pragmatics and discourse, non-literal language, lexicography, English dialects and variation, language and humor, and linguistic approaches to literature. Course may be repeated as topic changes.

ENG 352. The American Novel to 1914

Credits 3.00 PeopleSoft Course ID 003658 Grading Basis GRD

A study of the development of the American novel from its beginnings to the modern period.

ENG 355. Southern Literature

Credits 3.00 PeopleSoft Course ID 000690 Grading Basis GRD

Southern authors, especially those of the twentieth century.

ENG 356. Modern American Novel

Credits 3.00 PeopleSoft Course ID 009478 Grading Basis GRD

The American novel from 1914 to 1945.

ENG 357. Contemporary American Literature

Credits 3.00 PeopleSoft Course ID 000179 Grading Basis GRD

A study of contemporary American literature written since 1945.

ENG 358. Oral Literature

Credits 3.00 PeopleSoft Course ID 010967 Grading Basis GRD

This course is a study of oral literature, which may be organized by theme, geography or genre. The course examines the social, political and artistic reasons for the creation and popularity of this literature. May be repeated for credit when course content changes.

ENG 359. Studies in African American Literature

Credits 3.00 PeopleSoft Course ID 013583 Grading Basis GRD

A study of selected works of African American literature in multiple genres. May be repeated for credit when course content changes.

ENG 360. Introduction to Ethnic American Literature

Credits 3.00 PeopleSoft Course ID 013104 Grading Basis GRD

An overview of the literary production of one group or a variety of ethnic and immigrant American writers, including but not limited to Native American, Asian American, Mexican American, Indian American, Caribbean American, and Latino American literatures. Examines the experience of historically marginalized groups in the United States with a particular emphasis on identity, nationality, tradition, and language.

ENG 361. African American Fiction

Credits 3.00 PeopleSoft Course ID 008542 Grading Basis GRD

Selected works of fiction by major African American writers.

ENG 362. African American Poetry

Credits 3.00 PeopleSoft Course ID 006932 Grading Basis GRD

Selected works of poetry by major African American writers. May be repeated for credit when course content changes.

ENG 363. Native American Literature

Credits 3.00 PeopleSoft Course ID 013420 Grading Basis GRD

A study of Native American communities' and authors' literatures in North America, with emphasis on the relationship of that literature to their traditions and historical experiences.

ENG 364. Introduction to Asian American Literature

Credits 3.00 PeopleSoft Course ID 013955 Grading Basis GRD

The course is designed to introduce students to a variety of writings by Asian American authors. It will explore the historical formation of Asian American identities; issues of immigration, citizenship and race; and the aesthetic forms of representation explored by Asian American writers and artists.

ENG 366. Contemporary Critical Theory

Credits 3.00 PeopleSoft Course ID 008897 Grading Basis GRD

Study of the major debates in current critical discourse. Formerly ENG 426.

ENG 367. Latinx Literature

Credits 3.00 PeopleSoft Course ID 014460 Grading Basis GRD

This course is a study of literature by U.S. Latinx authors. The course explores the way writers from a variety of racial, ethnic and cultural backgrounds who identify as Latinx use the written word in service of narrating counter-histories, identity formation, and aesthetic and imaginative engagement with the world.

ENG 368. Women's Literature

Cross listed with: WGSS 368

Credits 3.00 PeopleSoft Course ID 010156 Grading Basis GRD

A study of literature by women.

ENG 369. Feminist Literary Theory

Cross listed with: WGSS 369

Credits 3.00 PeopleSoft Course ID 007982 Grading Basis GRD

An intensive study of a variety of feminist critical approaches and their applications to literature. Formerly ENG 467.

ENG 370. Queer Literature

Credits 3.00 PeopleSoft Course ID 009807 Grading Basis GRD

An exploration of texts and issues in literature written by and about lesbian, gay, bisexual, transgender and queer writers, including critical and theoretical issues as well as questions of canon. Text studied may include fiction, poetry, drama, essays and memoirs written primarily, but not exclusively, in the 20th century.

ENG 371. Literature and the Environment

Credits 3.00 PeopleSoft Course ID 005172 Grading Basis GRD

A critical examination of literature's representation of the interconnections between human beings, non-human beings and the environment.

ENG 374. Contemporary Global Anglophone Literature

Credits 3.00 PeopleSoft Course ID 013956 Grading Basis GRD

This course examines contemporary literature from many parts of the English-speaking world, with special attention to writers' attempts to assess the global legacies of colonialism in the contemporary moment, as well as what it means to participate in a self-consciously global literary culture today.

ENG 375. Irish and Anglo-Irish Literature

Credits 3.00 PeopleSoft Course ID 000637 Grading Basis GRD

A study of the works of Irish or Anglo-Irish writers.

ENG 376. Introduction to Scottish Literature

Credits 3.00 PeopleSoft Course ID 012935 Grading Basis GRD

An overview of Scottish literature, with an emphasis on fiction, from the Romantic period to the present. Emphasis on the problems of nation, identity and the politics of language and tradition in "minority literature."

ENG 377. Introduction to African Literature

Credits 3.00 PeopleSoft Course ID 012936 Grading Basis GRD

An introduction to African literature, tracing its changes over time. Examination of African literary theoretical concepts, literary genres (both oral and written), as well as an examination of Africa's contribution to familiar genres of written and oral literature.

ENG 378. Studies in South Asian Literature**Credits 3.00 PeopleSoft Course ID 011990 Grading Basis GRD**

A study of selected works of South Asian literature. Formerly ENG 427.

ENG 379. Literature and Empire**Credits 3.00 PeopleSoft Course ID 012937 Grading Basis GRD**

The course is designed as an overview of writings from regions of the world that were formerly colonized by Britain. It examines the colonial, nationalist and postcolonial shaping of individual and collective identities through literature; the intersections of race, gender and nation; the crafting of a new idiom in English in response to both political and literary histories; and the significance of choices of genre and form.

ENG 380. Introduction to Film**Cross listed with: SMAD 380****Credits 3.00 PeopleSoft Course ID 013448 Grading Basis GRD**

An introduction to the study of film as an aesthetic practice, including formal and industrial aspects of film analysis, theoretical approaches to film and writing and research methodologies of film and media studies.

ENG 381. History of Film to 1960**Credits 3.00 PeopleSoft Course ID 010230 Grading Basis GRD**

An analysis of film from its beginnings to the modernism of the 1950s and early 1960s.

ENG 382. History of Film Since 1960**Credits 3.00 PeopleSoft Course ID 011221 Grading Basis GRD**

An analysis of world cinema from early modernism through the present.

ENG 383. Film Genre**Credits 3.00 PeopleSoft Course ID 006329 Grading Basis GRD**

Study of film genre through the consideration of one of more film genres.

ENG 384. Film Authorship**Credits 3.00 PeopleSoft Course ID 008967 Grading Basis GRD**

Study of film authorship through the consideration of one or more directors.

ENG 385. Special Topics in Film Study**Credits 3.00 PeopleSoft Course ID 013459 Grading Basis GRD**

Study of a particular topic in film. May be repeated for credit when course content changes but not more than once, except with the approval of the department head.

ENG 390. The Environmental Imagination**Credits 3.00 PeopleSoft Course ID 005277 Grading Basis GRD**

An introductory creative writing class that provides a sampling of American environmental writing, with emphasis on the creative intelligence of the writer's imagination, process, and craft.

ENG 391. Introduction to Creative Writing – Nonfiction**Credits 3.00 PeopleSoft Course ID 004780 Grading Basis GRD**

A basic workshop in reading and writing works of creative nonfiction.

ENG 392. Introduction to Creative Writing – Poetry**Credits 3.00 PeopleSoft Course ID 008359 Grading Basis GRD**

A basic workshop in reading and writing poetry.

ENG 393. Introduction to Creative Writing – Fiction**Credits 3.00 PeopleSoft Course ID 007478 Grading Basis GRD**

A basic workshop in reading and writing fiction. May be repeated for credit when course content changes.

ENG 396. Advanced Composition**Credits 3.00 PeopleSoft Course ID 009261 Grading Basis GRD**

Extensive exercises in expository writing, with emphasis on rhetorical types of composition, designed to develop sophistication of style in the student's writing.

ENG 401. Advanced Studies in Medieval Literature**Credits 3.00 PeopleSoft Course ID 012938 Grading Basis GRD**

Advanced literary and philological study of non-British Medieval or British Medieval texts written in cross-cultural dialogue with those written circa 500-1480 c.e. in Old Irish, Old Norse/Icelandic, Old French, Old and Middle High German, Old Castilian, Classical and Medieval Latin, and Arabic. Readings in the original or in translation. Topics may be determined by period or geography, culture or politics, theme or genre. Course may be repeated as topic changes.

ENG 402. Advanced Studies in British Literature Before 1700**Credits 3.00 PeopleSoft Course ID 012939 Grading Basis GRD**

British literatures written prior to 1700, both within and without the British isles. Topics may include Anglo-Saxon and Anglo-Norman literature, vernacular literature, neo-Latin literature, Chaucer, late-medieval literature, Tudor and early modern literature, Shakespeare, Milton, and seventeenth century literature. May be repeated as course topic changes.

ENG 403. Advanced Studies in British Literature After 1700**Credits 3.00 PeopleSoft Course ID 012940 Grading Basis GRD**

Advanced study of British literatures dating from 1700 to the present. Topics may focus on a particular period of literature (eighteenth century, Romantic, Victorian, Modernist, or contemporary), or topics may focus on a genre or them that engages multiple periods. Course may be repeated as topic changes.

ENG 405. Advanced Studies in Anglophone Literature**Credits 3.00 PeopleSoft Course ID 012941 Grading Basis GRD**

Anglophone (English-speaking) literature from around the globe (including the Caribbean, Canada, Ireland, Australasia, Africa or India), in which identification with a particular nation, colonial status or imperial power is problematic or no longer applicable. Topic may focus on a particular theme or event, genre, time frame, formal or stylistic trend, author or set of authors, issue, or problem. May be repeated as topic changes.

ENG 407. Advanced Studies in American Literature**Credits 3.00 PeopleSoft Course ID 012942 Grading Basis GRD**

Study of literature(s) of the United States and North America, from the Colonial Period through the 21st Century. May include writing in multiple genres: narrative prose, poetry, drama, nonfiction. Topics may be historically delimited or thematically organized; specific sections may focus on a group of authors, a literary movement, a historical moment, or a broad theoretical question. Course may be repeated as topic changes.

ENG 408. Advanced Studies in African American Literature**Credits 3.00 PeopleSoft Course ID 012943 Grading Basis GRD**

Study of literature produced by African Americans, from the Colonial Period through the 21st century. May include writing in multiple genres: narrative prose, poetry, drama, nonfiction. Topics may be historically delimited or thematically organized; specific sections may focus on a group of authors, a literary movement, a historical moment or a broad theoretical question. Course may be repeated as topic changes.

ENG 410. Advanced Studies in Author**Credits 3.00 PeopleSoft Course ID 006215 Grading Basis GRD**

Study of the works of one (or two) British, American or Anglophone writers. May be repeated for credit when course content changes.

ENG 412. Special Topic Seminar**Credits 3.00 PeopleSoft Course ID 004820 Grading Basis OPT**

Study of a literary school, movement, genre or some other significant literary or linguistic topic. May be repeated for credit when course content changes; credit

may not be earned in both ENG 412 and ENG 512 unless course content changes.

ENG 412J. Special Topic Seminar

Credits 3.00 PeopleSoft Course ID 005397 Grading Basis GRD

ENG 412N. Special Topic Seminar

Credits 3.00 PeopleSoft Course ID 006459 Grading Basis GRD

Study of London theatre. Consideration given to current productions of classic and contemporary works. Emphasis on production elements including acting, directing, design, writing and economic considerations. Note: HUM 200L satisfies General Education Cluster Two, Group III. To receive this General Education credit student must register for the course as HUM 200L. You may not receive credit for both HUM 200L and ENG 412N . (included in the Incoming First Year program). **Prerequisite(s):** *Studies Abroad-London*

ENG 412R. American Theatre History

Credits 3.00 PeopleSoft Course ID 006854 Grading Basis GRD

ENG 413. Advanced Studies in Literature and Ideas

Credits 3.00 PeopleSoft Course ID 012944 Grading Basis GRD

Advanced study of the literary treatment of an organizing theme, which may be framed broadly as part of the human experience or within a tradition of studies in the humanities. Course content may include pertinent readings from other disciplines. Possible themes: love, death, nature, evil, the comic spirit. May be repeated as course topic changes.

ENG 414. Advanced Studies in Genre

Credits 3.00 PeopleSoft Course ID 012945 Grading Basis GRD

Advanced study of works drawn from a specific literary or film genre or subgenre or a small, related set of (sub)genres. May be repeated as course topic changes.

ENG 415. Advanced Studies in Textuality and the History of the Book

Credits 3.00 PeopleSoft Course ID 012946 Grading Basis GRD

Detailed literary, bibliographical, political and cultural analysis of the material features of texts as physical objects. Topics may include the relation between a book's physical features and its intellectual contexts; the production, dissemination and receptions of texts; the history of manuscript, print and digital text technologies; the material history of reading and of literacy; and so forth. May be repeated as course topic changes.

ENG 417. Advanced Studies in Linguistics and the English Language

Credits 3.00 PeopleSoft Course ID 012947 Grading Basis GRD

This course provides advanced study of a particular topic in English linguistics or in English language studies. Topics may include particular subfields of linguistics or linguistic theories, applications of linguistic theory to literary studies or other related fields, or specific structural, historical, and cultural aspects of the English language. May be repeated as topic changes.

ENG 420. Advanced Studies in Theory and Cultural Studies

Credits 3.00 PeopleSoft Course ID 012948 Grading Basis GRD

Advanced study of a topic or debate within contemporary critical theoretical or cultural studies discourses in the humanities. Course may be repeated as topic changes.

ENG 423. Advanced Studies in Gender and Sexuality in Literature

Cross listed with: *WGSS 423*

Credits 3.00 PeopleSoft Course ID 012949 Grading Basis GRD

Advanced study of a topic using a gender and sexuality studies approach to literary texts. This course will explore how gender and sexuality and their representation in literature are shaped by social, cultural, historical and political contexts. Course may be repeated as topic changes.

ENG 430. Advanced Studies in Comparative Literature

Credits 3.00 PeopleSoft Course ID 001211 Grading Basis GRD

Comparative study of selected world literature. May be repeated as course topic changes.

ENG 432. Advanced Studies in African Literature

Credits 3.00 PeopleSoft Course ID 010965 Grading Basis GRD

A study of selected works by African writers, focused by theme, geography or genre. May be repeated for credit when content varies.

ENG 433. Advanced Studies in Arabic Literature

Credits 3.00 PeopleSoft Course ID 011069 Grading Basis GRD

A study of Arabic writers. May be repeated for credit when content varies.

ENG 434. Advanced Studies in Latin American Literature in Translation

Cross listed with: *SPAN 434*

Credits 3.00 PeopleSoft Course ID 012062 Grading Basis GRD

This course will study Latin American literature in translation. The course will focus on the work of major Spanish American authors. May be repeated as course content changes.

ENG 436. Studies in German Literature

Cross listed with: *GER 436*

Credits 3.00 PeopleSoft Course ID 011088 Grading Basis GRD

A study of selected works of German literature. Instruction is in English. May be repeated for credit when course content changes.

ENG 437. Studies in Italian Literature

Cross listed with: *ITAL 437*

Credits 3.00 PeopleSoft Course ID 011078 Grading Basis GRD

A study of selected works of Italian literature. Instruction is in English. May be repeated for credit when course content changes.

ENG 438. Studies in Russian Literature

Cross listed with: *RUS 438*

Credits 3.00 PeopleSoft Course ID 011076 Grading Basis GRD

A study of selected works of Russian literature. Instruction is in English. May be repeated for credit when course content changes.

ENG 439. Advanced Studies in Major Authors of Literature in Spanish in Translation

Cross listed with: *SPAN 439*

Credits 3.00 PeopleSoft Course ID 012177 Grading Basis GRD

This course will study the work of both Peninsular and Latin American authors in translation. The course will focus on major Spanish-speaking authors and their work, both in Latin America and in Spain. May be repeated as course content changes.

ENG 447. Advanced Playwriting

Cross listed with: *THEA 447*

Credits 3.00 PeopleSoft Course ID 010811 Grading Basis GRD

An advanced workshop with emphasis on developing full-length dramatic material. **Prerequisite(s):** *THEA 347 or ENG 347 and junior standing.*

ENG 463L. Film Adaptations

Cross listed with: *SMAD 463*

Credits 3.00 PeopleSoft Course ID 010321 Grading Basis GRD

This course is the study of the process of adapting literature into feature films. Consideration is given to the original literary work, as well as to the changes undergone in its adaptation to film. **Prerequisite(s):** *For SMAD majors: junior or senior standing and SMAD 201, SMAD 202, SMAD 203, and SMAD 204; and either SMAD 301 or SMAD 301L or ENG 380/SMAD 380. For non-SMAD majors: junior or senior creative writing or film studies minors only; or permission of instructor.*

ENG 466. Advanced Studies in Women's Literature

Cross listed with: WGSS 466

Credits 3.00 PeopleSoft Course ID 005817 Grading Basis GRD

Advanced study of women's literary achievements in several cultural and historical contexts. May be focused by theme. May be repeated as course content varies. **Prerequisite(s):** ENG 368 or ENG 369.

ENG 483. Narrative Form

Credits 3.00 PeopleSoft Course ID 001573 Grading Basis GRD

The study, development and practice of narrative craft. **Prerequisite(s):** ENG 393 or permission of the instructor.

ENG 484. Poetic Craft and Creativity

Credits 3.00 PeopleSoft Course ID 009883 Grading Basis GRD

The study, development and practice of poetic craft. **Prerequisite(s):** ENG 392 or permission of the instructor.

ENG 490. Special Studies in English

Credits 3.00 PeopleSoft Course ID 007043 Grading Basis GRD

Independent study for students with high academic standing. Students may select work in (1) a literary type, period or author; (2) imaginative writing; or (3) linguistics. Approval of department head required; may be repeated for credit when course content changes.

ENG 493. Advanced Creative Nonfiction

Credits 3.00 PeopleSoft Course ID 010806 Grading Basis GRD

An advanced workshop in the writing of creative non-fiction narrative, with emphasis on point of view, form and style. **Prerequisite(s):** ENG 391 or permission of the instructor.

ENG 494. Advanced Poetry Writing

Credits 3.00 PeopleSoft Course ID 004915 Grading Basis GRD

An advanced workshop with emphasis on developing sound poetic form, voice and vision. **Prerequisite(s):** ENG 392 or permission of the instructor.

ENG 495. Advanced Fiction Writing

Credits 3.00 PeopleSoft Course ID 007659 Grading Basis GRD

An advanced workshop with emphasis on developing sound narrative prose form, style and vision. May be repeated for credit when course content changes. **Prerequisite(s):** ENG 393 or permission of the instructor.

ENG 496. Advanced Topics in Creative Writing

Credits 3.00 PeopleSoft Course ID 011899 Grading Basis GRD

Study of a specific and concentrated aspect of creative writing. Topics will vary semester to semester. May be repeated for credit when the topic changes.

Prerequisite(s): ENG 391, ENG 392 or ENG 393, as appropriate to course content.

ENG 499. Honors

Credits 1.00 PeopleSoft Course ID 006863 Grading Basis GRD

See catalog section "Graduation with Honors."

ENG 499B. Honors Project

Credits 3.00 PeopleSoft Course ID 007404 Grading Basis GRD

ENG 499C. Honors Project

Credits 2.00 PeopleSoft Course ID 004617 Grading Basis GRD

Environment

ENVT 101. Perspectives in Environmental Science [C3PP]

Credits 3.00 PeopleSoft Course ID 014651 Grading Basis GRD

This course offers an introductory view of essential themes in environmental science. It integrates the study of the natural processes that take place on Earth. Emphasis is placed on understanding the development of the physical and chemical principles and their application in understanding environmental issues in the modern world. **Prerequisite(s):**

One of the following: MATH 103, MATH 110, MATH 205, MATH 220, MATH 231 or MATH 235.

ENVT 200. Environmental Systems Theory

Credits 3.00 PeopleSoft Course ID 012329 Grading Basis GRD

Explores three aspects of understanding the environment. First, the kind of problem the environment is and the thinking strategies that will best yield insights and understanding. Second, how humans create and/or respond to environmental issues and crises. Third, examination of past environmental changes and how humans have been affected by and responded to those changes. Final synthesis explores what we can and cannot do practically to respond to future changes. Does not satisfy elective credit or count as credit for geology or earth science majors.

ENVT 225. Environmental Advocacy and the Psychology of Change

Credits 3.00 PeopleSoft Course ID 013922 Grading Basis GRD

This is a summer study abroad course in Malta about environmental advocacy. Examines sense of place, nature connectedness and cultural influences on environmental advocacy and environmental movements through interaction with a variety of NGOs and government organizations. Explores the psychology of change and elements of cooperation and collaboration that strengthen efforts to protect the environment and engage citizens in their natural world.

ENVT 300. Topics in Environmental Humanities

Credits 3.00 PeopleSoft Course ID 013790 Grading Basis GRD

Special topics in the humanities and arts that enhance the study of environmental humanities and are not currently taught in the regular curriculum.

ENVT 301. Internship in Environmental Humanities

Credits 3.00 PeopleSoft Course ID 013791

Provides the student with practical experience in areas pertinent to the study of environmental humanities. Any internship experience must be approved by the coordinator in advance, and details of supervision and evaluation should be spelled out in advance. The internship may also be through an academic unit, but must be approved for credit by the environmental humanities coordinator in advance of the experience.

ENVT 302. Internship in Environment

Credits 1.00 - 4.00 PeopleSoft Course ID 014609 Grading Basis GRD

This course provides the student with practical experience in areas pertinent to the study of environmental studies, sciences or management. Any internship experience must be approved by the coordinator in advance, and details of supervision and assessment should be spelled out in advance. May be taken for a maximum of six credits. **Prerequisite(s):** Minor coordinator permission.

ENVT 303. Topics in Environment

Credits 3.00 PeopleSoft Course ID 014617 Grading Basis GRD

Examination of selected topics that are of current importance for interdisciplinary environmental studies, sciences and management including: environmental problem solving, sustainability, addressing climate change, environmental resiliency and more. May be repeated for credit when course content changes.

ENVT 366. Religion, Animals and the Environment

Cross listed with: REL 366

Credits 3.00 PeopleSoft Course ID 014080 Grading Basis GRD

This course analyzes the ways in which various religions, especially Judaism and Christianity, understand the relationship of human beings to the environment and non-human animals. We will explore how religious worldviews translate into human impact on the non-human biosphere. Given

the global reach of American environmental policies and lifestyles, and the prominent role that biblical interpretation has played in shaping American attitudes and policy, special emphasis will be placed on historical interpretations of the Bible, ranging from human dominionism to human responsibility in caring for the earth, its creatures and its ecosystems. The course explores the complexities involved in using religious positions, interpretations of biblical texts and apocalyptic arguments to inform both environmentalism and policy debates related to the environment. Students will gain a basic introduction to methods of biblical scholarship and familiarity with the general state of scientific consensus on environmental challenges.

ENVT 400. Capstone Seminar in Environmental Problem Solving

Credits 3.00 PeopleSoft Course ID 012331 Grading Basis GRD

Integrates perspectives from three environment programs: environmental management, environmental science and environmental studies. The course is team taught using a case-study approach to environmental issues, emphasizing teamwork and student initiative. Topics vary. **Prerequisite(s):** *Completion of 15 hours in declared environment minor or permission of the instructor. Students wishing to complete more than one of the environmental minors (environmental studies, environmental science or environmental management) may receive dual credit for ENVT 400.*

ENVT 401. Studio or Independent Study in Environmental Humanities

Credits 3.00 PeopleSoft Course ID 013792

Students may propose to engage in a creative, expressive or scholarly project either through their home department or using the ENVT identifier. Studio or independent study must be approved by the Environmental Humanities coordinator in advance of the experience.

ENVT 403. Independent Study in Environment

Credits 1.00 - 4.00 PeopleSoft Course ID 014616 Grading Basis GRD

Students propose to engage in a scholarly or applied project about interdisciplinary environmental problem-solving in coordination with the relevant environmental minor coordinator (studies, sciences, management). Proposals must include a topic or key question, a learning plan with readings and other content, an appropriately sized productive output, and a faculty supervisor. Must be approved by the environmental minor coordinator. May be repeated for maximum of six credit hours. **Prerequisite(s):** *Minor coordinator permission.*

Environmental Management

ENVM 480. Selected Topics in Environmental Management

Credits 1.00 - 4.00 PeopleSoft Course ID 010863 Grading Basis OPT

Topics in environmental management which are of interest to the upper division student but not otherwise covered in the regular course offerings. Offered only with the approval of the director. May be repeated for credit when course content changes. Students should consult the instructor prior to enrolling. **Prerequisite(s):** *Junior or senior standing in environmental management program. Topic selected may dictate additional prerequisites.*

Exceptional Education

EXED 200. Foundations of Exceptional Education

Credits 3.00 PeopleSoft Course ID 001670 Grading Basis GRD

This course is designed to support study of the historical perspectives, models, theories, philosophies and trends that provide the basis for exceptional education practice. The status of persons with exceptional learning needs (ELNs), legislative and judicial mandates and current regulation related to individuals with ELNs, and the 'rights and responsibilities' of various

stakeholders as they relate to exceptionality will be stressed. The role of culture, environment, family and exceptionality will be explored.

EXED 202. Field Experiences in Special Education

Credits 3.00 PeopleSoft Course ID 009361 Grading Basis CNC

Provides students with supervised experiences with persons with disabilities. Placements are made in various settings including schools, institutions and recreational programs. **Prerequisite(s):** *EXED 200 and permission of the instructor.*

EXED 203. Contemporary Issues in Special Education

Credits 1.00 PeopleSoft Course ID 014145 Grading Basis GRD

This course investigates current issues and controversies in the field of exceptional education. This course is designed to support the student's understanding of how sociological, familial, political and cultural issues are affecting the field of special education. It will also challenge students to apply this knowledge to their practice. **Prerequisite(s):** *EXED 200.*

EXED 300. Educational Technology for Students with Disabilities

Credits 1.00 PeopleSoft Course ID 010552 Grading Basis GRD

An introduction to instructional technology for persons with disabilities. The role of assistive technology in the educational process is investigated. Students are exposed to a variety of instructional programs and equipment. Federal and state guidelines, interdisciplinary team functioning, and program, as well as equipment selection, are addressed. **Prerequisite(s):** *Teaching and non-teaching minors only.*

EXED 302. Mentoring Children and Youth with Mild Disabilities

Credits 2.00 PeopleSoft Course ID 012088 Grading Basis GRD

The course will provide students with the knowledge and skills to engage in mentoring of children and youth with learning disabilities and attentional disorders. Students will focus on increasing their understanding of self-awareness related to living with a disability, effective compensatory learning strategies and self-advocacy skills. **Prerequisite(s):** *Because of the purpose of this course is to increase self-awareness and mentoring skills related to understanding disabilities, it is open only to students who are registered with the Office of Disability Services.*

EXED 303. Foundations of Classroom and Behavior Management

Cross listed with: EXED 512

Credits 3.00 PeopleSoft Course ID 000960 Grading Basis GRD

This course is designed to provide students with an understanding of and skill to apply classroom and behavior management techniques and interventions, including techniques that promote emotional wellbeing and teach and maintain behavioral conduct and skills consistent with norms, standards and rules of the educational environment. Diverse approaches for classroom and behavior management based upon behavioral, cognitive, affective, social and ecological theory and practice will be learned.

EXED 305. Characteristics of Acquired Brain Injury

Credits 3.00 PeopleSoft Course ID 013827 Grading Basis GRD

EXED 305 provides an overview of acquired brain injury – its causes, complications, consequences and considerations for survivors, caregivers and families. Instruction will emphasize rehab treatment philosophies and approaches, cultural competencies, gender and sexuality issues, military populations, pediatrics and adolescents, and families. Students will learn how to apply knowledge of brain injury sequelae to future healthcare settings and educational learning environments. **Prerequisite(s):** *EXED 200.*

EXED 306. Lifespan Issues for Individuals with Disabilities

Credits 3.00 PeopleSoft Course ID 006549 Grading Basis GRD

This course examines how issues such as legal mandates and policies, self advocacy, family involvement, educational services, transition, and interagency collaboration impact individuals with disabilities and their families from birth through postsecondary life. The students will be challenged to compare and analyze needs and services available and accessed by individuals with disabilities. **Prerequisite(s):** *EXED minor, chronic illness minor, family studies minor, or music and human studies minor.*

EXED 309. Supporting Community Access for Adults with Disabilities

Credits 3.00 PeopleSoft Course ID 013842

This course provides students with an understanding of and experience working with young adults with disabilities who are exiting Special Education eligibility. The goal is to support these young adults in learning to access the JMU community and gain experience with nondisabled same-age peers.

Prerequisite(s): *EXED 200.*

EXED 310. Survey of Emotional Disturbance

Credits 3.00 PeopleSoft Course ID 010582 Grading Basis GRD

A detailed study of the characteristics, diagnosis, treatment, assessment and education of individuals with emotional/behavioral disorders. Medical, psychological, behavioral and environmental causes are presented as well as therapeutic interventions, educational resources and instructional strategies.

Prerequisite(s): *EXED 200 and non-teaching minors only.*

EXED 320. Survey of Learning Disabilities

Credits 3.00 PeopleSoft Course ID 006629 Grading Basis GRD

A detailed study of the theories, characteristics, etiology and needs of individuals with learning disabilities including ADHD. Focus will be on causation and terminology as well as historical perspectives and current trends related to practices in identification and treatment of learning disabilities.

Prerequisite(s): *EXED 200 and EXED minors only.*

EXED 325. Inclusive Practices in Early Childhood

Credits 3.00 PeopleSoft Course ID 014342 Grading Basis GRD

This course is designed to introduce students to the issues and trends in the inclusive education of young children. It will provide the historical, philosophical, social and legal background for current practices in the field. This class will also engage students in synthesizing and analyzing evidence-based practices in field.

EXED 330. Survey of Intellectual Disabilities

Credits 3.00 PeopleSoft Course ID 010553 Grading Basis GRD

A detailed study of the characteristics, diagnosis, treatment and education of individuals with intellectual disabilities. Medical aspects and implications for support needs are addressed as well as educational settings, resources and instructional techniques designed to facilitate integration for individuals with intellectual disabilities. **Prerequisite(s):** *EXED 200 and EXED minors only.*

EXED 339. The Role of the Speech-Language Pathologist in Public Schools

Credits 3.00 PeopleSoft Course ID 014163 Grading Basis GRD

How a speech/language pathologist manages multiple schools; schedules across general education instruction; screens; assesses; uses diagnostic tools for evaluation and placement of students based on the educational impact of the speech-language impairment; attends special education and school meetings with an array of teachers, therapists and parents; completes divisional and state paperwork and; provides therapy based on each student's Individualized Education Program (IEP) will be covered. **Prerequisite(s):** *EXED 200.*

EXED 341. Characteristics of Learners with Disabilities Accessing the General Curriculum

Credits 3.00 PeopleSoft Course ID 012079 Grading Basis GRD

The course covers historical, ethical and legal aspects involving the education of children with disabilities. Definitions and foundational characteristics of teaching children with disabilities accessing the general curriculum are featured. Identification, education and evaluation of academic skills and behavior of students with disabilities are presented. How family, cultural, socioeconomic and environment impact education are discussed. Professional behavior standards are examined. **Prerequisite(s):** *EXED 200; SPED majors or BIS majors with a SPED concentration.*

EXED 342. Characteristics of Learners with Low Incidence Disabilities

Accessing the Adapted Curriculum

Credits 3.00 PeopleSoft Course ID 014117 Grading Basis GRD

This course covers current research and practices of characteristics, learning and behavioral supports for students with low-incidence disabilities accessing the adapted curriculum. Includes students with autism, moderate/severe intellectual disability, traumatic brain injury, severe/multiple disabilities and deaf-blindness. Contains issues including age span issues, emotional/behavioral adjustment, social and language development, cognitive functioning, medical aspects, and cultural/ethnic and socioeconomic factors. **Prerequisite(s):** *SPED major or BIS with SPED concentration only; EXED 200.*

EXED 343. Communication Language and Literacy for Learners on the Adapted Curriculum

Credits 3.00 PeopleSoft Course ID 014375 Grading Basis GRD

This course is designed to provide an introduction to the communication, language, social skills and literacy needs of learners with disabilities who participate in the adapted curriculum. The course provides an introduction to teaching communication skills as well as using alternative and augmentative communication. Students will explore assessment and instruction in communication and language skills, social skills, and literacy instruction (including reading and writing). Students will consider a range of instructional methodologies and techniques for providing instruction, support and generalization of skills in these areas. This course focuses on evidence-based instructional practices in communication, language, social skills and literacy and how to integrate these practices into teaching. **Prerequisite(s):** *SPED majors or BIS majors with SPED concentration only.* **Corequisite(s):** *EXED 342.*

EXED 375. Overview Study of Autism Spectrum Disorders

Credits 3.00 PeopleSoft Course ID 011920 Grading Basis GRD

This course provides an overview of the current issues involved in working with people who have been identified as having an autism spectrum disorder. Areas addressed will include learning characteristics; current research and factors involved with causation, assessment and diagnosis; positive behavioral supports; social skills development; sensory processing, motor planning and sensory integration; and communication and language development.

Prerequisite(s): *EXED 200; EXED minor.*

EXED 376. Initial Practicum for Special Education PreProfessional Preparation

Credits 1.00 PeopleSoft Course ID 012893 Grading Basis GRD

A practicum experience that will provide an opportunity to observe the roles of special education teachers who are working with students with disabilities who are accessing the general curriculum. Practicum students will have the opportunity to observe instruction at both elementary and secondary levels. They will be able to observe classroom management and instruction in math, reading and writing. Some introductory level instruction opportunities may be provided. **Prerequisite(s):** *EXED 200.*

EXED 401. Issues in Exceptional Education

Credits 1.00 - 3.00 PeopleSoft Course ID 000497 Grading Basis GRD

This course considers current problems and issues in special education as they relate to the professional education of teachers. EXED teaching and non-teaching minors only with permission of the instructor. May be repeated if the topic varies.

EXED 402. Positive Behavior Supports and Individualized Interventions for Young Children

Credits 1.00-3.00 PeopleSoft Course ID 014146 Grading Basis GRD

This course is designed for early childhood educators (ECEs) who may work with young children with challenging behaviors. This course focuses on basic principles of behavior as means to help ECEs understand the function of behavior, or the reasons why behavior occurs. This course focuses on proactive strategies as a means to prevent challenging behavior, measuring behaviors using data collection and implementing behavior interventions that are aligned with behavior function. This course emphasizes a positive approach to behavior management aligned with best practices in teaching social emotional skills to young children. **Prerequisite(s):** *This course is open only to students with an applied associate degree in early childhood from a Virginia community college.*

EDUC 200 and PSYC 160.

EXED 407. Transitions of Learners with Disabilities

Credits 3.00 - 4.00 PeopleSoft Course ID 014116 Grading Basis GRD

This course is designed to provide a detailed study of the transitions throughout the educational experience of persons with disabilities, including transitions between IDEA Part C and Part B services, elementary-middle-high school, and high school-post-secondary environments. Focus is given to the services and skills needed to support successful integration into and functioning within the routines and activities of these settings. This course includes two-three hours each week functioning as a job coach to a local student with disabilities. **Prerequisite(s):** *EXED 200 and EXED 474.*

EXED 411. Applied Behavior Analytic Services as a Paraprofessional

Credits 3.00 PeopleSoft Course ID 014182 Grading Basis GRD

This course is designed to provide the student with the necessary instruction to apply for licensure as a Registered Behavior Technician (RBT). This course will provide the student with the skills needed to implement behavior analytic services in a variety of settings (schools, homes, clinics) with individuals across the lifespan. The course will address all items required for RBT training, including measurement, assessment, skill acquisition, behavior reduction, documentation and reporting, professional conduct, and scope of practice.

EXED 416. Overview and Assessment of Autism Disorders

Credits 3.00 PeopleSoft Course ID 011921 Grading Basis GRD

This course is designed to provide an overview of the current issues involving working with children who have been identified as having an autism spectrum disorder. Areas covered in-depth will include learning characteristics, current research and factors involved with causation, assessment and diagnosis. We will discuss positive behavioral supports; social skills development; sensory processing, motor planning and sensory integration; and communication and language development as these will be covered in much greater depth in other courses. A range of institutional methodologies and techniques will be emphasized throughout the course.

EXED 417. Communication, Language and Sensory Issues of Learners with ASD and/or on the Adapted Curriculum

Credits 3.00 PeopleSoft Course ID 011922 Grading Basis GRD

This course is designed to provide an in-depth study of the current issues involved in working with learners who have been identified as having an autism spectrum disorder and/or being on the adapted curriculum. The course will

review learning characteristics, current research and factors involved with causation, assessment and diagnosis, and positive behavioral supports to set the stage. The course will explore social skill development; sensory processing, motor planning and sensory integration; and communication and language development. The course will consider a range of instructional methodologies and techniques for providing instruction, support and generalization of skills in these areas. **Prerequisite(s):** *EXED 342 or EXED 416.*

EXED 418. Challenging Behaviors, Positive Behavioral Supports, Functional Behavioral Assessment and Behavior Intervention Plans

Credits 3.00 PeopleSoft Course ID 011924 Grading Basis GRD

This course is designed to provide an in-depth look at the behavioral challenges those with a disability in the autism spectrum might face and display. Areas addressed will include behavioral characteristics, current research and factors related to behavioral challenges in this population, positive behavioral supports, Functional Behavioral Plan Development, implementation and monitoring. We will cover data collection in relation to assessment and monitoring behaviors. We will review social skills development; sensory processing, motor planning and sensory integration; and communication and language development as these are covered in much greater depth in other courses. A range of institutional methodologies and techniques will be emphasized throughout the course. **Prerequisite(s):** *EXED 416 and EXED 417.*

EXED 429. Teaching Learners with Complex Care Needs

Credits 3.00 PeopleSoft Course ID 014118 Grading Basis GRD

Regardless of instructional setting, special education teachers will likely come in contact with students with complex medical challenges related to disability. This course focuses on students with multiple disabilities, as these students are likely to require medical and technological interventions in schools. The course focuses on typical development and application of this knowledge for students with significant disabilities. It also focuses on specific disabilities and the overlay of sensory impairments, medical needs and technological needs related to those disabilities. Finally, this course focuses on planning for instruction and collaborating with caregivers and team members of all backgrounds in order to meet the complex needs of these students. **Prerequisite(s):** *EXED 200.*

EXED 431. Assistive Technology for Individuals with Sensory Impairments

Cross listed with: *EXED 531*

Credits 3.00 PeopleSoft Course ID 012086 Grading Basis GRD

This course is designed to heighten the awareness of participants to specific technology and resources available to enhance and improve the abilities of individuals with sensory impairments to succeed in school, daily living activities and employment. This course is delivered via a distance education format.

Prerequisite(s): *EXED 435. Corequisite(s):* *EXED 435.*

EXED 432. Braille Code

Credits 3.00 PeopleSoft Course ID 009443 Grading Basis GRD

This course provides instruction in the development, use and application of the Braille literary code and its implications for educational/literacy programs for students with visual disabilities. Students will develop the skills to read and write contracted and uncontracted Braille, while acquiring instructional methodologies for teaching children who are blind to read and write. Sources of Braille materials for educational purposes are identified. This course is delivered via a distance education format. **Prerequisite(s):** *EXED 435.*

Corequisite(s): *EXED 435.*

EXED 434. Curriculum and Assessment for Students with Visual Impairments

Credits 3.00 PeopleSoft Course ID 009005 Grading Basis GRD

This course provides students with knowledge and understanding of the educational assessment of students with visual impairments and additional

disabilities including deaf-blindness. Students practice assessing and planning educational programs for students with visual impairments. Also covered in this course are assessment technology for students with visual impairments; determination of learning needs and appropriate learning media; and the relationship of assessment, IEP development, and placement. This course is delivered via a distance education format. **Prerequisite(s):** *EXED 435.*

Corequisite(s): *EXED 435.*

EXED 435. Characteristics of Students with Visual Impairments

Credits 1.00 PeopleSoft Course ID 001529 Grading Basis GRD

This course provides an overview of the characteristics of and services to persons with visual impairments, including the impact of visual impairments on infants' and children's growth and development, child and adolescent emotional and social development, and family interaction patterns. It considers the educational, conceptual, psycho-social and physical implications of a visual impairment. This course is delivered via a distance education format.

EXED 440. Classroom Management and Professional Collaboration

Credits 3.00 PeopleSoft Course ID 011087 Grading Basis GRD

A focus on techniques used to manage the behavior of students. Emphasized are strategies used to prevent inappropriate behavior from occurring and/or worsening. Other interventions are taught such as techniques for working with others (e.g., parents, teachers, administrators) who may provide behavior management assistance to teachers and administrators.

EXED 441. Functional Applications of Low Tech Assistive Technology

Credits 2.00 PeopleSoft Course ID 012080 Grading Basis GRD

This course will focus on functional applications of low-technology solutions within the areas of self-care; mobility and transfer; communication; stability and support; sports, recreation, and leisure; and academic and work environments. The course will include exploration and opportunities to design and create low-tech devices for children and adults. **Prerequisite(s):** *EXED 300.*

EXED 443. Assistive Technology Use for Individuals With Disabilities

Credits 3.00 PeopleSoft Course ID 000309 Grading Basis GRD

This course is designed to enhance students' awareness and understanding of the range of assistive technologies available and their instructional implications for individuals with disabilities. Laboratory and demonstration experiences will enable students to select and utilize devices and software in settings serving individuals with disabilities. **Prerequisite(s):** *EXED 200.*

EXED 450. Principles of Specialized Reading Instruction

Credits 3.00 PeopleSoft Course ID 011388 Grading Basis GRD

The course focuses on acquisition and development of reading skills for students with disabilities. Content includes characteristics of students with reading disabilities, informal assessment, relationship of oral language to reading, stages of reading development, research-based methods, principles of specialized reading instruction and collaboration to support reading development. At least 10 hours of reading instruction to a K-12 student is required and is in addition to any assigned practicum. **Prerequisite(s):** *LED 430; SPED major or BIS major with concentration in SPED.*

EXED 455. Collaborative Teaching for Learners with Disabilities

Credits 3.00 PeopleSoft Course ID 012087 Grading Basis GRD

Students in this course will gain knowledge and practice skills in consultation, case management, and collaboration with individuals, families, educators, related service providers and other human service professionals. An overview of collaborative processes, collaborative models for supporting the education of students with disabilities and for effective management of paraprofessionals will be studied. **Prerequisite(s):** *EXED 200 and special education non-teaching minors.*

EXED 460. Differentiation of Instruction and Academic Collaboration

Credits 3.00 PeopleSoft Course ID 010556 Grading Basis GRD

This course assists preservice teachers in using their understanding of exceptional learners and learning to accommodate the diversity of students in the general education classroom. In addition, preservice teachers will explore the roles of teachers and how general and special education teachers collaborate to meet the needs of exceptional students. Teaching education students only.

EXED 465. Perspectives of Early Childhood Special Education

Credits 3.00 PeopleSoft Course ID 011707 Grading Basis GRD

This course is designed to provide the student with an overview of educational programming and service delivery for children with developmental delays and/or disabilities, ages 0 to 5. Particular attention is given to federal legislation, historical perspective and current recommended practice in programming educational services for young children with delays and/or disabilities.

EXED 473. Methods of Instruction for Learners Accessing the Adapted Curriculum

Credits 3.00 PeopleSoft Course ID 014119 Grading Basis GRD

Methods for remediation and adaptation of instruction in academic and functional skills for students with moderate/severe disabilities accessing the adapted curriculum. Emphasizes instructional approaches such as task analysis, systematic instruction, functional/daily living skills and general curriculum access using adapted content standards. A 10-hour practicum placement provides field experience to practice skills learned in this course. **Prerequisite(s):** *EXED 200 and EXED 342.*

EXED 474. Assessment and Evaluation in Special Education

Credits 3.00 PeopleSoft Course ID 010584 Grading Basis GRD

This course is designed to provide study and application of the foundations of assessment and evaluation related to management of instruction and behavior of individuals with ELNs. The course emphasizes issues and skills in selection, administration, interpretation and use of a variety of tools and techniques in all stages of the decision-making process for instruction and behavior management. Application of this new knowledge and skill will be through case studies and direct assessment. **Prerequisite(s):** *SPED major or BIS major with SPED concentration.*

EXED 475. Program Planning in Special Education

Credits 3.00 PeopleSoft Course ID 011708 Grading Basis GRD

This course is designed to teach legal and practical skills and strategies in development of program plans to meet the academic and behavioral needs of students with disabilities accessing the K-12 general or adapted curriculum. Skills will be applicable in a variety of placement settings and service delivery models. Included is a detailed study of purposes and procedures involved in the development of Individualized Education Plans. This will include how to use curriculum-based assessment data to develop the plan and evaluate the success of instruction in academics, social behaviors and life skills. **Prerequisite(s):** *EXED 341 or EXED 342, EXED 474.*

EXED 476. Practicum in Literacy and Assessment

Credits 2.00 - 3.00 PeopleSoft Course ID 012704 Grading Basis GRD

This practicum is designed to provide a structured supervised experience assessing learning, planning and delivery of instruction to students with disabilities who are either accessing the general education curriculum or an adapted curriculum. Teacher candidates will gather data to make decisions about the effectiveness of instruction. Application of skills in planning direct instruction and creating instructional materials to improve student with

disabilities literacy in all areas is required. **Prerequisite(s):** EXED 474; SPED major.

EXED 477. Remedial Methods in Special Education

Credits 3.00 **PeopleSoft Course ID** 014121 **Grading Basis** GRD

This course is designed to provide students with knowledge about intensive remediation methods for students with disabilities who are significantly below grade level. The students will examine intensive instructional methods that address not only reading, writing and math but also metacognitive processes and support skills that will improve their academic achievement across the general curriculum. **Prerequisite(s):** EXED 474 and EXED 484.

EXED 478. Supervised Practice in Special Education Methods

Credits 1.00-3.00 **PeopleSoft Course ID** 014120 **Grading Basis** GRD

This course provides field experience opportunities to observe, reflect and participate in the special education methods related to the education of students with disabilities who are functioning below grade level and working on either the general or adapted curriculum. The focus is on practicing intensive interventions. This course is repeatable with different corequisites for up to four credits. **Prerequisite(s):** EXED 474. **Corequisite(s):** EXED 473 or EXED 477.

EXED 480. Student Teaching in Special Education

Credits 3.00 - 6.00 **PeopleSoft Course ID** 014122 **Grading Basis** CNC

This student teaching experience in the area of special education enables the teacher candidate to apply the education interventions and management competencies acquired in previous courses and fieldwork. The teacher candidate will participate in varied experiences related to the licensure area(s) within special education they are seeking. The teacher candidate has the opportunity to develop their professional skills and ethical understanding of the profession of teaching and how special education fits within this profession. Over the course of the placements, the teacher candidate will assume a range of responsibilities for planning and implementing multiple individualized education plans for students with disabilities. They will experience the many roles of a special education teacher and how collaboration is a key tool in each of those roles. Due to the mentoring of a cooperating special education teacher, the teacher candidate should feel free to take risks in trying new methods and developing their skills. The course is taken on a Credit or No Credit evaluation criterion. It is repeatable for up to 12 credits and must be taken twice for initial special education licensure. **Prerequisite(s):** EXED 473 or EXED 477.

EXED 483. Teachers as Professionals

Credits 1.00-3.00 **PeopleSoft Course ID** 014123 **Grading Basis** GRD

This seminar is designed to accompany the student teaching experiences. Student teachers will have the opportunity to reflect on their skills, problem-solve school and classroom experiences, increase awareness of the need to continue career-long learning, discuss linkages between program course work and student teaching experience, explore their own skill level and plan for their on-going professional development. Sections in fall and spring will have differentiated content designed to link with the curriculum content being covered in that semester, as well as to the student teacher's experience. **Corequisite(s):** EXED 480.

EXED 484. Inclusive Practices in Special Education

Credits 3.00-4.00 **PeopleSoft Course ID** 012705 **Grading Basis** GRD

This course is a detailed study of inclusive practices for students with disabilities. The course emphasizes building skills in professional collaboration required by special education teachers in their role as consultant, co-teacher, collaborative support and case manager. Teacher candidates will learn to adjust assignments and provide scaffolding and accommodations in order to develop

independent functioning in students with disabilities. Skills that allow both special education teachers and students with disabilities to function within a general education setting will be developed. Teacher candidates enrolled in this course will complete a K-12 classroom experience within a general education placement a minimum of two days a week. **Prerequisite(s):** EXED 341 or EXED 342.

EXED 485. Systematic Behavioral Support and Interventions

Credits 3.00 **PeopleSoft Course ID** 011709 **Grading Basis** GRD

This course presents an overview to classroom management for the early childhood and elementary classroom teacher. It includes an historical look at the guidance tradition, a review of traditional approaches to classroom management and a focus away from punishment toward proactive strategies. Best practices in classroom management will be presented from an inclusive perspective for teachers of all children. **Prerequisite(s):** EXED 303 and EXED 474; SPED major or BIS major with SPED concentration.

EXED 486. Supervised Clinical Practice with Planning and Methods in Special Education

Credits 2.00 - 3.00 **PeopleSoft Course ID** 012994 **Grading Basis** GRD

This practicum provides a structured supervised experience in selecting and using specialized methods for teaching academic skills, group management techniques and individual interventions that teach and maintain emotional, behavioral and social skills instruction to students with disabilities, and gathering data to make decisions about the effectiveness of intervention. Students will also have the opportunity to refine knowledge and skill application from previous program work. **Prerequisite(s):** EXED 200. **Corequisite(s):** EXED 484.

EXED 487. Fostering Positive Classroom Behaviors

Credits 3.00 **PeopleSoft Course ID** 014624 **Grading Basis** GRD

This course will provide some foundational knowledge related to individual behavior interventions but is designed to focus on providing application and evaluation of group management techniques and individual interventions that teach and maintain emotional, behavioral and social skills. Students will study various systematic behavioral interventions to support the behavior and learning of individuals with disabilities of all levels including positive behavioral supports, functional assessments of behavior and teaching social skills. A variety of data collection procedures to inform their professional practice will be examined. Students will apply evidence-based practices related to Positive Behavior Supports, assessment of challenging behaviors and data collection to inform instructional practice and document student response to interventions that improve behavior such that academic learning can occur. **Prerequisite(s):** Individualized Study majors with concentration in special education.

EXED 490. Special Studies in Special Education

Credits 1.00 - 3.00 **PeopleSoft Course ID** 004408 **Grading Basis** GRD

Designed to allow the student to complete independent study under faculty supervision. **Prerequisite(s):** Permission of the department head.

Family Studies

FAM 133. The Contemporary Family

Credits 3.00 **PeopleSoft Course ID** 005505 **Grading Basis** GRD

Concepts of variations in forms and lifestyles of families. Consideration is given to the family life cycle and the interdependency between the family and society.

FAM 300. Child Development

Credits 3.00 **PeopleSoft Course ID** 004808 **Grading Basis** GRD

A study of the factors influencing the physical, cognitive, social and emotional growth of the young child. Emphasis is given to the importance of family

relations and development of observational skills. **Prerequisite(s):** PSYC 101, PSYC 160 or equivalent.

FAM 325. Parent-Child Relationships Across the Lifespan

Cross listed with: SOWK 325

Credits 3.00 PeopleSoft Course ID 001889 Grading Basis GRD

This course focuses on giving and receiving familial attention, care and support over the lifespan and across generations. Combines developmental and ecosystems frameworks to explore family life as the primary arena in which people learn and establish social behavior and interpersonal relationships, in conjunction with extrafamilial connections. **Prerequisite(s):** For Family Studies Minors taking it as a FAM course: FAM 133 or SOCI 374. For Social Work Majors taking it as a SOWK course: SOWK 287 and SOWK 288.

FAM 327. Substance Use Interventions

Cross listed with: GERN 327/SOWK 327

Credits 3.00 PeopleSoft Course ID 014227 Grading Basis GRD

Explore types, effects and prevalence of substance use in the U.S. Impacts of use on individuals, families, communities and society is considered through biopsychosocial, economic and legal/political lenses. Dual foci include developmental risks and outcomes for individuals and families throughout the life course, and social policy debate and legislation. Includes a survey of intervention approaches and treatment modalities across the span of self-help, medical treatment, programs in behavioral health and court-mandated models.

FAM 347. Issues Affecting LGBTQIAP+ Individuals and Their Families

Cross listed with: SOWK 347

Credits 3.00 PeopleSoft Course ID 014548 Grading Basis GRD

Operating from a cultural humility framework, this course focuses on practice, policy, and historical and social issues impacting LGBTQIAP+ individuals and their families. This course utilizes a strengths-based perspective to identify protective factors and explore resiliency within the LGBTQIAP+ community in the face of social stigma, marginalization and oppression. The course encourages students' critical self-reflection of personal and cultural value systems and how these may impact understanding of LGBTQIAP+ populations.

FAM 362. Social Work with Immigrants and Refugees

Cross listed with: SOWK 362

Credits 3.00 PeopleSoft Course ID 014604 Grading Basis GRD

This course explores the scope and complexity of global/international migration and its impacts on national policy and social service structures and organizational response. It provides a framework to understand transmigration and acculturation, to analyze aspects of current immigration law, and to examine the role of various service systems to address the needs of immigrant and refugee individuals and families integrating into local communities. Service-learning in an agency that serves the local immigrant community is required.

FAM 375. Grant Writing for Agencies

Cross listed with: GERN 375, NPS 375, SOWK 375

Credits 3.00 PeopleSoft Course ID 011229 Grading Basis GRD

Emphasizing active learning, this course teaches the basics of grant and proposal writing. Efficient research, persuasive prose and the importance of relationships are stressed. Private and corporate philanthropy and government grants are examined.

FAM 386. Youth Empowerment Strategies (YES)

Cross listed with: SOWK 386

Credits 3.00 PeopleSoft Course ID 011299 Grading Basis GRD

Students learn to use group activities that include the creative arts, low ropes and self-discovery in youth empowerment. The goal is to help youth build life skills and make informed decisions. Prior to beginning work with youth, students complete 25 hours of training.

FAM 400. Theory Survey

Credits 1.00 PeopleSoft Course ID 003085 Grading Basis GRD

This seminar provides students with several key theoretical frameworks that span the family ecology and gerontology concentrations of the minor and will inform and support their capstone experiences. **Prerequisite(s):** FAM 133 or SOCI 374; For family ecology concentration: At least 9 additional credits from the family ecology track, and junior or senior standing; For gerontology concentration: PSYC 160, SOCI/GERN 280, GERN 305, and junior or senior standing. **Corequisite(s):** For family ecology concentration: FAM 401.

FAM 401. Issues and Applications

Credits 2.00 PeopleSoft Course ID 014258 Grading Basis GRD

The course emphasizes the application of knowledge through the development and implementation of a substantial, theory-based, in-depth individualized project. Students may adapt the project to fit their career objectives and/or plans for graduate study. **Prerequisite(s):** FAM 133 or SOCI 374, and at least 9 additional credits from the family ecology track, not including FAM 400.

Corequisite(s): FAM 400.

FAM 487. Special Topics in Family Studies

Credits 3.00 PeopleSoft Course ID 005320 Grading Basis GRD

Examination of selected topics that are of current importance to family studies. Course may be repeated for credit. **Prerequisite(s):** FAM 133 or SOCI 374.

FAM 490. Special Studies in Family Studies

Credits 3.00 PeopleSoft Course ID 009682 Grading Basis GRD

The course is designed to give capable students in family studies an opportunity to complete independent study under faculty supervision. Course may be repeated for credit. **Prerequisite(s):** FAM 133 or SOCI 374 and two additional courses in the family studies minor or permission of the instructor.

Finance

FIN 250. Introduction to Quantitative Finance

Credits 3.00 PeopleSoft Course ID 011751 Grading Basis GRD

The purpose of this course is to provide a broad introduction to the markets and instruments of engineered finance. The focus of the course is to expose students to the properties and uses of the array of non-traditional financial instruments that are increasingly trading in both the exchange and over-the-counter markets. **Prerequisite(s):** Minimum grade of "C" in MATH 235, MATH 236, ECON 200 and ECON 201.

FIN 301. Principles of Finance

Credits 3.00 PeopleSoft Course ID 012951 Grading Basis GRD

The purpose of this course is to provide a foundation in the principles and tools of finance, which include financial analysis, the time value of money, capital budgeting and capital structure. Open to students with a B.S. or B.A. economics major with a concentration in finance as well as students majoring in health sciences. Open to students as a repeat/forgive for COB 300B.

Prerequisite(s): Junior standing and COB 241

FIN 310. Principles of Real Estate

Credits 3.00 PeopleSoft Course ID 000742 Grading Basis GRD

The purpose of this course is to assist students in developing a foundation in real estate principles, apply finance and economic principles to valuation and evaluation of real estate and analyze contracts and financing in residential and commercial real estate transactions. **Prerequisite(s):** "C" or better in both FIN 360 and COB 300B.

FIN 325. Money and Banking**Cross listed with:** *ECON 325***Credits 3.00 PeopleSoft Course ID 010051 Grading Basis GRD**

The purpose of this course is to examine the economic role of money, banking, and monetary policy within current institutional settings and under alternative theories explaining the interrelationships between money, the financial system and economic activity. **Prerequisite(s):** *ECON 200 and ECON 201.*

FIN 328. Time Series Analysis**Cross listed with:** *MATH 328***Credits 3.00 PeopleSoft Course ID 010125 Grading Basis GRD**

Regression and exponential smoothing methods for forecasting nonseasonal and seasonal time series, stochastic processes, Box-Jenkins' autoregressive and moving average models. **Prerequisite(s):** *MATH 238 or MATH 300; and MATH 318 or MATH 329.*

FIN 345. Finance Fundamentals for Non-Business Majors**Credits 3.00 PeopleSoft Course ID 008659 Grading Basis GRD**

Offers an introduction to the basic principles in financial decision-making, providing an overview of the role of the forms of business, taxation and financing of a business enterprise. This course develops the basic financial skills and tools necessary for financial analysis, capital investment project analysis and valuation. Not recommended for students seeking admission to MBA programs. Students will not receive credit for this course if they also take FIN 301 or COB 300B. **Prerequisite(s):** *ACTG 244 or COB 242, junior standing (60 hours) and a cumulative 2.0 GPA in all courses taken at JMU. Restricted to non-college of business majors.*

FIN 355. International Financial Management**Credits 3.00 PeopleSoft Course ID 012596 Grading Basis GRD**

The purpose of this course is to provide a comprehensive examination of the investing and financing decisions of a multinational business entity. Particular emphasis is on global financial markets and instruments, exchange-rate risk management, short-term and long-term financing for multinational firms and asset-liability management in an international environment. **Prerequisite(s):** *COB 300B. International business majors only.*

FIN 360. Analytical Methods in Finance**Credits 3.00 PeopleSoft Course ID 010213 Grading Basis GRD**

The purpose of this course is to introduce the finance major to quantitative methods in finance, as applied to financial instruments and capital markets. Emphasis is placed in the theoretical determination of asset prices, risk, and return, as well as the estimation and analysis of returns and asset prices.

Prerequisite(s): *Not permitted for quantitative finance majors. COB 300; a minimum grade of "C" in both COB 291 and COB 242 (finance, international business and economics B.B.A. majors); FIN 301; a minimum grade of "C" in ECON 385 (economics B.A. and B.S. majors).* **Corequisite(s):** *Not permitted for quantitative finance majors. COB 300; a minimum grade of "C" in both COB 291 and COB 242 (finance, international business and economics B.B.A. majors); FIN 301; a minimum grade of "C" in ECON 385 (economics B.A. and B.S. majors).*

FIN 362. Financial Analysis**Credits 3.00 PeopleSoft Course ID 012126 Grading Basis GRD**

This course is designed to prepare the finance major to use and interpret economic and accounting information that is essential in financial analysis and valuation. **Prerequisite(s):** *Minimum grade of "C" in COB 300B, FIN 360, COB 241 and COB 242.*

FIN 365. Intermediate Financial Management**Credits 3.00 PeopleSoft Course ID 006775 Grading Basis OPT**

The purpose of this course is to provide an in-depth study of the theories of capital structure, long-term financing decisions, working capital management and current topics such as mergers and bankruptcy. Computer applications.

Prerequisite(s): *Minimum grade of "C" in COB 300B and "C" in FIN 360 (finance majors); minimum grade of "C" in FIN 250 (quantitative finance majors).*

FIN 370. Real Estate Finance**Credits 3.00 PeopleSoft Course ID 001894 Grading Basis OPT**

The purpose of this course is to offer a comprehensive examination of the decision-making processes involved in purchasing and financing real assets. The focus is on the cost of funds and optimal financial structure of complex real estate projects. **Prerequisite(s):** *Minimum grade of "C" in COB 300B and FIN 360.*

FIN 371. Principles of Investments**Credits 3.00 PeopleSoft Course ID 004586 Grading Basis GRD**

The purpose of this course is to provide an investor's view of the operation of the capital markets. This course covers the theories and practice of investments, including analysis of financial instruments and real assets and their effective combination into portfolios. **Prerequisite(s):** *Minimum grade of "C" in FIN 301 and "C" in FIN 360 (economics B.A. and B.S. majors); minimum grade of "C" in COB 300B and "C" in FIN 360 (finance majors); minimum grade of "C" in FIN 250 (quantitative finance majors).*

FIN 372. International Finance and Payments**Cross listed with:** *ECON 372***Credits 3.00 PeopleSoft Course ID 007108 Grading Basis GRD**

Examines international financial markets, instruments and institutions; determination of spot and forward exchange rates, interest arbitrage, hedging and speculation; and alternative policies for achieving equilibrium in international payments. **Prerequisite(s):** *ECON 200 and ECON 201.*

FIN 375. Madison Investment Fund Management**Credits 3.00 PeopleSoft Course ID 011730 Grading Basis GRD**

The course is an accelerated introduction to the investment environment with a focus on fundamental analysis of stocks, overlay strategies to enhance portfolio performance and familiarization with the trading and pricing of the wide variety of instruments in the modern financial marketplace. The course is limited to members of the Madison Investment Fund. **Prerequisite(s):** *FIN 371 and department head permission with membership in the Madison Investment Fund.*

FIN 378. Fixed Income Analysis**Credits 3.00 PeopleSoft Course ID 012688 Grading Basis GRD**

The purpose of this course is to examine the market for and the price/yield determinants of various fixed income securities including Treasury debt, corporate bonds, agency debt, municipal bonds and mortgage and asset-backed securities. Topics include securitization, the term structure of interest rates, and portfolio management strategies such as duration, convexity and immunization. **Prerequisite(s):** *FIN 371.*

FIN 380. Elemental and Derivative Securities Analysis**Credits 3.00 PeopleSoft Course ID 001268 Grading Basis GRD**

The purpose of this course is to undertake an in-depth examination of the broad array of financial instruments traded in contemporary finance markets that are available for financing, investing, and managing financial price risk.

Prerequisite(s): *Minimum grade of "C" in COB 300B and "C" in FIN 360 (finance majors); minimum grade of "C" in FIN 250 (quantitative finance majors); minimum grade of "C" in FIN 301 and "C" in FIN 360 (economics B.S. and B.A. majors).*

FIN 395. Mathematical Finance**Cross listed with:** *MATH 395***Credits 3.00 PeopleSoft Course ID 008999 Grading Basis GRD**

This course presents an overview of the role of mathematical concepts in financial applications. Topics include continuous time finance, optimization, numerical analysis and applications in asset pricing. **Prerequisite(s):** *MATH 237 and FIN 380.*

FIN 405. Securities Pricing**Cross listed with:** *MATH 405***Credits 3.00 PeopleSoft Course ID 003276 Grading Basis GRD**

A quantitative treatment of the theory and method of financial securities pricing to include an examination of closed form pricing models such as the Black-Scholes and its various derivatives as well as numerical solution techniques such as binomial methods. **Prerequisite(s):** *FIN 395 or MATH 395.*

FIN 420. Financial Planning and Wealth Management**Credits 3.00 PeopleSoft Course ID 014204 Grading Basis GRD**

This course introduces the student to financial planning and wealth management. The course is designed for students who may want to pursue a career in financial planning and related professional designations. In addition to the financial planning process and working with clients, this course covers the topics of insurance, cash management, debt management, investment management, taxes and estate planning. **Prerequisite(s):** *FIN 371.*

FIN 434. Fundamentals of Financial Data Science**Credits 3.00 PeopleSoft Course ID 014081 Grading Basis GRD**

An introduction to data analysis and programming in finance. Emphasis is placed on problem identification, the selection and application of tools and techniques to address problems, and data analysis. **Prerequisite(s):** *"C" or better in FIN 360 or FIN 250.*

FIN 450. Financial Risk Management**Credits 3.00 PeopleSoft Course ID 000526 Grading Basis GRD**

The purpose of this course is to explore forward contracts, futures, swaps, and options, which are the basic building blocks for creating financial risk management programs for companies subject to financial risks such as changes in exchange rates, commodity price fluctuations and changes in interest rates. **Prerequisite(s):** *FIN 371 and a minimum grade of "B-" in FIN 380.*

FIN 451. Risk Management II**Credits 3.00 PeopleSoft Course ID 012719 Grading Basis GRD**

The purpose of this course is to present an intermediate treatment of the theory and applications of market, credit, liquidity and operational risk management. It builds upon concepts introduced in previous course work to present the theoretical constructs underlying risk management, as well as the quantitative skills required for risk analysis and the implementation of risk management techniques. **Prerequisite(s):** *A minimum grade of "B-" in FIN 450.*

FIN 455. Advanced International Financial Management**Credits 3.00 PeopleSoft Course ID 008607 Grading Basis GRD**

The purpose of this course is to focus on the analysis of major international financial management issues and risk faced by businesses operating in global markets. The emphasis is on the management of foreign exchange transactions, operating and translation exposures by multinational corporations, the functions of various currency hedging instruments, and the application of international funding and investment techniques. **Prerequisite(s):** *Minimum grade of "C" in COB 300B and FIN 360.*

FIN 460. Commercial Banking**Credits 3.00 PeopleSoft Course ID 005057 Grading Basis OPT**

The purpose of this course is to study the objectives, functions, policies, organizational practices and government regulation of commercial banks. An intensive study is undertaken of the asset and liability structure of commercial banks. Special emphasis is placed on how banks are adapting to the changes in their operating and regulatory environments. **Prerequisite(s):** *Minimum grade of "C" in COB 300B and FIN 360.*

FIN 471. Portfolio Management**Credits 3.00 PeopleSoft Course ID 005462 Grading Basis GRD**

The purpose of this course is to cover the application of investment concepts within a case format. The course focuses on investment management, bringing together economics, capital markets and valuation to form a basis for decision making in financial asset selection, risk/reward analysis, portfolio selection and formation. **Prerequisite(s):** *FIN 371.*

FIN 475. Financial Modeling and Risk Analysis**Credits 3.00 PeopleSoft Course ID 011911 Grading Basis GRD**

The purpose of this course is to introduce students to practical methods used to identify, quantify, predict, value, diversify, and manage risk in the financial environment. Students use sensitivity analysis, Monte Carlo and Latin Hypercube simulations, bootstrapping, time series forecasting and dynamic optimization techniques as applied to capital budgeting and structure, pro forma financial statements, multi-objective portfolio allocation, discounted cash flow analysis and real options. **Prerequisite(s):** *FIN 365 and FIN 371.*

FIN 480. Seminar in Quantitative Finance Research and Data Analysis**Credits 3.00 PeopleSoft Course ID 009188 Grading Basis GRD**

The purpose of this course is to develop the research skills of quantitative finance students. The primary focus of the course is on empirically-oriented student-initiated research. Students are guided through the process of financial research with a particular emphasis on the analysis of real-world data. Presentation of original research is expected. **Prerequisite(s):** *FIN 405/ MATH 405.*

FIN 488. Advanced Financial Policy**Credits 3.00 PeopleSoft Course ID 006208 Grading Basis GRD**

The financing of a new business enterprise or expansion and the financial condition of existing firms is examined within a case format. The objective of this examination is to elicit a policy decision which effectively addresses the issues identified in the case. **Prerequisite(s):** *FIN 360 and FIN 365 and senior Finance majors*

FIN 490. Special Studies in Finance**Credits 1.00 - 3.00 PeopleSoft Course ID 000461 Grading Basis GRD**

Designed to give capable students in finance an opportunity to complete independent study under faculty supervision. Admission by recommendation of the instructor and permission of the director.

FIN 498. Special Topics in Finance**Credits 1.00 - 3.00 PeopleSoft Course ID 012124 Grading Basis GRD**

The purpose of this course is to provide an opportunity for students to explore areas of current topical interest or to exploit special situations. Course content will vary. For current course content, consult with your adviser. **Prerequisite(s):** *FIN 250 or FIN 360.*

FIN 499A. Honors**Credits 1.00 PeopleSoft Course ID 000166 Grading Basis GRD****FIN 499B. Honors****Credits 3.00 PeopleSoft Course ID 000615 Grading Basis GRD****FIN 499C. Honors****Credits 2.00 PeopleSoft Course ID 008687 Grading Basis GRD**

Fine Arts

ARTS 100. Introduction to the Visual and Performing Arts

Credits 1.00 PeopleSoft Course ID 012973 Grading Basis CNC

An exploration of the concept and practice of creativity, the commonalities that exist in all arts endeavors, the artist as citizen and the concurrent responsibilities, and the almost infinite possibilities opened in the market place by the study of the arts. The course includes guest lectures by resident and visiting artist/scholars and field experiences, such as attending exhibits and performances with pre- and post-event discussions. **Prerequisite(s):** *Must be admitted to the arts learning community and in residence in Wayland Hall during the semester in which the course is taken.*

ARTS 300. Arts Administration Internship

Credits 1.00 - 3.00 PeopleSoft Course ID 014435 Grading Basis GRD

The internship experience provides students with an opportunity to explore career interests while applying knowledge and skills learned in the classroom in a professional work setting. The experience also helps students gain a clearer sense of what they still need to learn and provides an opportunity to build professional networks. **Prerequisite(s):** *Instructor consent required.*

ARTS 400. Advanced Arts Administration Internship

Credits 1.00 - 3.00 PeopleSoft Course ID 014436 Grading Basis GRD

The internship experience provides students with an in-depth opportunity to apply knowledge and skills learned in the classroom in a professional work setting. The experience provides an opportunity to build professional networks and develop a resume for a career in arts administration. **Prerequisite(s):** *Instructor permission required.*

Foreign Language

FL 309. Civilization: Travel-Study

Credits 1.00 - 3.00 PeopleSoft Course ID 009965 Grading Basis GRD

A directed program of travel-study designed to augment a student's knowledge of a particular civilization. Arrangements must be made with the faculty member designated by department head. Permission of the department head is required prior to enrollment in the program.

FL 410. Introduction to Romance Linguistics

Credits 3.00 PeopleSoft Course ID 014468 Grading Basis GRD

This course takes a historical approach to the study of Romance languages, the linguistic evolution from Latin to Romance, with a focus on three of the modern Romance languages, Spanish, Italian and French. The language of instruction is English. Students will study examples of sound change, morphological change, syntactical change and lexical development. The course will introduce linguistic geography, language contact, the relationship of language and culture, the role of dialects, the creation of the national standards, minority languages, and the expansion of Romance languages beyond Europe. **Prerequisite(s):** *SPAN 232 or FR 232 or ITAL 232 or the equivalent as approved by the instructor; or a pre-approved course in linguistics, upon approval of the instructor. These courses have been pre-approved to fulfill the linguistics prerequisite: ANTH 305/SCOM 305, ANTH 405, ENG 308, ENG 310, ENG 348, ENG 417, PHIL 380, SCOM 245, SMAD 150, SPAN 310, SPAN 311, SPAN 404, SPAN 448.*

FL 430. Forensic Linguistics: Language and the Law

Credits 3.00 PeopleSoft Course ID 014420 Grading Basis GRD

This course in forensic linguistics will provide students with a deeper understanding of contexts in which language and the law intersect, such as the analysis of police interrogations/interviews, linguistic evidence, police statements, legal statutes and interpreted mediated events. The course will also examine language use (oral and textual) with vulnerable populations (e.g., children, persons with cognitive and intellectual disabilities), non-native speakers of English, African American Vernacular English (AAVE) and the use

of linguistic profiling. **Prerequisite(s):** *ANTH 305/SCOM 305, ANTH 405, ENG 308, ENG 310, ENG 348, ENG 417, PHIL 380, SCOM 245, SMAD 150, SPAN 310, SPAN 311, SPAN 404, or SPAN 448. Courses that are not included on the list and that have a linguistics focus/content may be considered, but require pre-approval from the instructor.*

FL 446. Special Topics in Foreign Literature

Credits 3.00 PeopleSoft Course ID 003666 Grading Basis GRD

Study of a particular topic in literature. May be taught in English or in the language but cannot be counted for major, minor or licensure unless taught in the language. Course may be repeated if content varies. **Prerequisite(s):** *Permission of the instructor.*

FL 447. Special Topics in Civilization and Culture

Credits 3.00 PeopleSoft Course ID 012669 Grading Basis GRD

Students will study a particular topic in the civilization and/or culture of a specific country in the world. Course may be repeated. **Prerequisite(s):** *Permission of the instructor.*

FL 448. Special Topics in Linguistics

Credits 3.00 PeopleSoft Course ID 012670 Grading Basis GRD

Students will study a particular topic in the linguistics of a specific country. Topics could include an introduction to sociolinguistics and psycholinguistics. Course may be repeated. **Prerequisite(s):** *Permission of the instructor.*

FL 490. Special Studies in Foreign Languages

Credits 1.00 - 4.00 PeopleSoft Course ID 006378 Grading Basis GRD

Allows superior students an opportunity to complete independent studies under faculty supervision. Work may be done in all languages offered in the department but may not replace course offerings. **Prerequisite(s):** *Permission of the department head.*

Foreign Language Education

FLED 370. Modern Foreign Language Assessment

Credits 3.00 PeopleSoft Course ID 013603 Grading Basis GRD

This course is designed to prepare prospective foreign language teachers to create and evaluate both formal and informal learner assessments and to prepare candidates to meet future teacher evaluation criteria.

FLED 470. Methods of Modern Foreign Language Teaching

Credits 3.00 PeopleSoft Course ID 013194 Grading Basis GRD

Research findings about language teaching will be used to identify the most effective instructional strategies for teaching languages to students in grades preK-12. Emphasis will be on developing plans for employing the strategies and making appropriate instructional decisions based on instructional goals, the learner, and available resources. **Prerequisite(s):** *Full admission to teacher education program; PSYC 160 and EDUC 200. Corequisite(s): FLED 471.*

FLED 471. Modern Foreign Language Field Experience

Credits 3.00 PeopleSoft Course ID 013195 Grading Basis GRD

Provides practical classroom experience in elementary, middle and high school settings to preK-12 Foreign Language students under the supervision of an inservice teacher and a clinical professor. Students engage in classroom activities that provide an opportunity for them to practice the strategies and concepts learned in the methods courses. **Corequisite(s):** *FLED 470.*

FLED 475. Supervised Student Teaching Experience

Credits 12.00 PeopleSoft Course ID 013344 Grading Basis CNC

Participants will experience the full range of conditions and tasks expected of a teacher for students in grades preK-12. They will be expected to develop and demonstrate competencies in teaching with the supervision and support of experienced teachers. Students must register for two eight-week blocks during the same semester for a total of twelve credits. **Prerequisite(s):** *All required*

courses for licensure and approval for student teaching through the teacher education program. Corequisite(s): FLED 476.

FLED 476. Student Teaching Seminar

Credits 3.00 PeopleSoft Course ID 013604 Grading Basis GRD

A seminar designed to promote reflective decision making among teacher candidates during their student teaching experiences. Teacher candidates will engage in case analysis and complete the Teacher Work Sample as their culminating senior project. **Corequisite(s): FLED 475.**

French

FR 101. Elementary French I

Credits 3.00 - 4.00 PeopleSoft Course ID 007442 Grading Basis GRD

The fundamentals of French through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. If student has had two or more years of the language in high school he/she will not receive credit for the course.

FR 102. Elementary French II

Credits 3.00 - 4.00 PeopleSoft Course ID 004713 Grading Basis GRD

The fundamentals of French through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. If student has had two or more years of the language in high school he/she will not receive credit for the course.

Prerequisite(s): FR 101.

FR 109. Accelerated Review of Elementary French (3, 1)

Credits 3.00 PeopleSoft Course ID 007948 Grading Basis GRD

Reviews elementary French grammar, reading, writing, speaking and listening skills in French. One hour's work a week in the language laboratory. For students who have had no more than two or three years of French in high school and qualify through the placement exam. **Prerequisite(s):** *Permission of the department head or placement exam score.*

FR 111. Intensive French I

Credits 6.00 PeopleSoft Course ID 002220 Grading Basis GRD

The fundamentals of French through intensive listening, speaking, reading and writing. The 4-week course is the equivalent of FR 101-102.

FR 112. Intensive French II

Credits 6.00 PeopleSoft Course ID 003602 Grading Basis GRD

The fundamentals of French through listening, speaking, reading and writing. This four-week course is the equivalent of FR 231-232. **Prerequisite(s):** *FR 102 or FR 109 or FR 111 or per placement exam score.*

FR 231. Intermediate French I

Credits 3.00 PeopleSoft Course ID 005112 Grading Basis GRD

A thorough review of grammar, vocabulary building, conversation, composition and reading. **Prerequisite(s):** *FR 102 or FR 109 or FR 111 or placement exam score.*

FR 232. Intermediate French II

Credits 3.00 PeopleSoft Course ID 000178 Grading Basis GRD

A thorough review of grammar, vocabulary building, conversation, composition and reading at the advanced intermediate level. **Prerequisite(s):** *FR 231 or permission of the instructor or per placement exam score.*

FR 300. Grammar and Communication

Credits 3.00 PeopleSoft Course ID 001785 Grading Basis GRD

Intensive training in grammatical structures and their application to oral and written communication. Instruction is in French. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** *FR 212 or FR 232 or placement exam score.*

FR 307. History of French Culture and Society

Credits 3.00 PeopleSoft Course ID 010660 Grading Basis GRD

A study of the social, economic, political and artistic development of France from the Middle Ages to 1900. Instruction is in French. **Prerequisite(s):** *FR 300.*

FR 307P. History of French Civilization

Credits 3.00 PeopleSoft Course ID 001996 Grading Basis GRD

A study of the social, economic, political and artistic development of France from the Middle Ages to the present. Instruction is in French. **Prerequisite(s):** *FR 300.*

FR 308. Contemporary History and Culture in the Francophone World

Credits 3.00 PeopleSoft Course ID 010743 Grading Basis GRD

This course is a study of life and culture in the Francophone world, with emphasis on the 20th century. Instruction is in French. **Prerequisite(s):** *FR 300.*

FR 315. French Phonetics

Credits 3.00 PeopleSoft Course ID 001016 Grading Basis GRD

Intensive drill in French sounds and intonation patterns. Instruction is in French. **Prerequisite(s):** *FR 300.*

FR 320. French Oral and Written Communication

Credits 3.00 PeopleSoft Course ID 010667 Grading Basis GRD

Intensive training in the use of modern, everyday French with emphasis on conversation and composition. Readings in French will provide a context for discussion and writing. **Prerequisite(s):** *FR 300 or equivalent.*

FR 330. Business French

Credits 3.00 PeopleSoft Course ID 003280 Grading Basis GRD

A study of commercial and technical vocabulary and trade customs in conjunction with practice in the art of commercial communication including interviews, letter writing and simultaneous interpretation. Instruction is in French. **Prerequisite(s):** *FR 300.*

FR 335. Introduction to Francophone Literature

Credits 3.00 PeopleSoft Course ID 007375 Grading Basis GRD

This course is a study of the main literary schools in the Francophone world, from Classicism to the Nouveau Roman. Course includes textual analysis of sample writings representative of the most important literary movements. Instruction is in French. **Prerequisite(s):** *FR 320.*

FR 339. French Literature of the Enlightenment

Credits 3.00 PeopleSoft Course ID 004551 Grading Basis GRD

The purpose of this course is to acquaint students with 18th century French literature and culture through the study of key influential texts. Students' analyses of these texts (i.e. essays, novels, plays, films, paintings and comics) will be grounded in key political, scientific and artistic movements.

Prerequisite(s): *FR 320.*

FR 351. French/English Translation

Credits 3.00 PeopleSoft Course ID 000598 Grading Basis GRD

An intensive course in writing and translation from French into English and from English into French. Contemporary topics taken from various fields. Comparative terminology. **Prerequisite(s):** *FR 320.*

FR 375. Business and Society in the Francophone World

Credits 3.00 PeopleSoft Course ID 012452 Grading Basis GRD

This course explores the development of the Francophone societies in the historical, political and economic context. In this course several aspects will be investigated: agricultural, textile, fashion and wine industries; motion picture, music and media industries; and import and export products. In addition, this course will include the study of banking and financial institutions, and health and education systems. **Prerequisite(s):** *FR 300.*

FR 399. French Short Stories

Credits 3.00 PeopleSoft Course ID 013923 Grading Basis GRD

The purpose of this course is to acquaint students with different types of French short stories and the various narrative techniques writers use to address issues of plot, character, place and theme. Students will acquire familiarity with methodologies and tools that will sharpen their understanding of the genre and their ability to analyze it. Students will engage with the course material through academic and/or creative writing. Instruction and readings are in French. **Prerequisite(s):** FR 320

FR 400. Advanced Conversation**Credits 3.00 PeopleSoft Course ID 010744 Grading Basis GRD**

This course centers on various basic communicative functions such as convincing, narrating, describing, negotiating, and obtaining and giving information. Students will experiment with real-life situations, debate about current events and discuss cultural perspectives and contemporary issues. In order to produce and reproduce oral scenarios, students may use role playing and public speaking techniques as well as authentic materials (visual, audio and textual) to interact orally in conversational French. Instruction is in French. **Prerequisite(s):** FR 320.

FR 401. Advanced Writing**Credits 3.00 PeopleSoft Course ID 014082 Grading Basis GRD**

This class provides students with different types of textual, descriptive, narrative and argumentative models. Students will experiment with a wide array of material, analyzing and producing their own cultural and/or literary materials that may include advertisements, comics, news, scenarios, plays, short stories, receipts, and blogs, reinforcing their academic writing and exploring their creativity in French. Instruction and readings are in French. **Prerequisite(s):** FR 320.

FR 420. Advanced Genre Studies**Credits 3.00 PeopleSoft Course ID 003858 Grading Basis GRD**

420A: A study of French theatre from the Middle Ages to the 20th century.
420B: A study of French poetry from the Middle Ages to the 20th century.
420C: A study of French narrative fiction from the Middle Ages to the 20th century. Instruction is in French.

Prerequisite(s): FR 320.

FR 446. Special Topics in Francophone Literature**Credits 3.00 PeopleSoft Course ID 003248 Grading Basis GRD**

This course is a study of a particular topic in Francophone literature. It may cover one or more genre. Course may be repeated if content varies.

Prerequisite(s): FR 320.

FR 447. Special Topics in Francophone Culture**Credits 3.00 PeopleSoft Course ID 012662 Grading Basis GRD**

Students will study a particular topic in the culture of Francophone countries. Course may be repeated if content varies. **Prerequisite(s):** FR 320.

FR 448. Special Topics in Francophone Linguistics**Credits 3.00 PeopleSoft Course ID 012668 Grading Basis GRD**

Students will study a particular topic of French linguistics within the Francophone world. Topics could include an introduction to French sociolinguistics and psycholinguistics. Course may be repeated if content varies. **Prerequisite(s):** FR 320.

FR 465. French Cinema 1930-1980**Credits 3.00 PeopleSoft Course ID 002815 Grading Basis GRD**

A study of French cinematography from 1930 to 1980. Emphasis given on the following directors: Renoir, Pagnol, Carné-Prévert, Cocteau, Vadim, Chabrol, Resnais, Godard, Rohmer, Lelouch, Truffaut and Malle. Instruction is in French. Counts as a culture course, not as a literature course. **Prerequisite(s):** FR 320.

FR 466. Contemporary French Cinema**Credits 3.00 PeopleSoft Course ID 011752 Grading Basis GRD**

A study of French cinema from the 1990s until the present and its place in contemporary French culture. The course will focus on films dealing with specific moments or events in French history, as well as the evolution of the French film industry. Films to be analyzed in terms of their socio-political context and judged by their cultural perspective. **Prerequisite(s):** FR 320.

FR 490. Special Studies in French**Credits 1.00 - 4.00 PeopleSoft Course ID 001999 Grading Basis GRD**

Allows students an opportunity to complete independent studies under faculty supervision. **Prerequisite(s):** Permission of the department head.

FR 499A. Honors**Credits 1.00 PeopleSoft Course ID 002450 Grading Basis GRD****FR 499B. Honors Project****Credits 3.00 PeopleSoft Course ID 001904 Grading Basis GRD****FR 499C. Senior Honors Project****Credits 2.00 PeopleSoft Course ID 000896 Grading Basis GRD**

Geography

GEOG 161. Geospatial Tools and Techniques**Credits 1.00 - 6.00 PeopleSoft Course ID 011717 Grading Basis GRD**

An introduction to the use of geospatial tools, such as geographic information systems (GIS), global positioning systems (GPS) and remote sensing, applied to a variety of areas, including cultural geography, environmental science, ecology, geology and public planning.

GEOG 200. Geography: The Global Dimension [C4GE]**Credits 3.00 PeopleSoft Course ID 006614 Grading Basis GRD**

This course promotes global understanding through the study of humans, their institutions and processes, and the resulting interactions between humans and the environment. The course will include the study of Western and nonWestern peoples and their social, cultural, political and economic relationships. May be used for general education credit.

GEOG 210. Physical Geography (2, 2)**Credits 4.00 PeopleSoft Course ID 003732 Grading Basis GRD**

This introductory course is an examination of systems and processes that influence patterns of Earth's atmosphere, biotic communities, soils and landforms at multiple spatial and temporal scales. Included are classroom and laboratory experiences that are geared toward investigating interrelationships among atmospheric conditions, Earth's natural surface characteristics and human-induced modifications of Earth's features.

GEOG 215. Introduction to Geographic Information Science and Cartography**Credits 3.00 PeopleSoft Course ID 001606 Grading Basis GRD**

Basic principles of geographic information systems and map design, including their use in spatial analysis and information management.

GEOG 216. Earth Observation and GPS**Credits 3.00 PeopleSoft Course ID 012213 Grading Basis GRD**

An introduction to remote sensing, global positioning system (GPS) and computer fundamentals in Geographic Science. Basic concepts will be illustrated with practical applications, including hands-on work collecting data with GPS units and exploring remote sensing images from a variety of different instruments. Environmental applications will be featured.

GEOG 230. Spatial Thinking and Problem Solving**Credits 3.00 PeopleSoft Course ID 004877 Grading Basis GRD**

Introduction to the critical thinking skills associated with problems with inherent spatial components. Identification of the spatial elements of a given problem, the data requirements for addressing that problem, collections/acquisitions

and organization of data, and use of geographic information systems to explore spatial patterns relevant to the problem of interest. **Prerequisite(s):** *GEOG 215 with a "C" or better, GEOG 216 with a "C" or better and an introductory course in Statistics (ISAT 251, MATH 220 or equivalent) or permission of the instructor.*

GEOG 280. Human Geography: The Cultural Landscape

Credits 3.00 PeopleSoft Course ID 002047 Grading Basis GRD

The course themes are human culture, cultural variations over the face of the Earth and how these variations are related to selected global issues. Topics covered include world demographics, world religions and languages, patterns of human migration, political systems and human conflict, agricultural systems and impact on the physical world.

GEOG 290. Human-Environment Interactions

Credits 3.00 PeopleSoft Course ID 012224 Grading Basis GRD

This course evaluates human-environment interactions from a holistic point of view. It incorporates geographic perspectives of these interactions, which include political, cultural, social, economic, and ethical factors that influence how people perceive, impact, and manage the natural world. The course will emphasize geographic theories of resource use, humans as part of the landscape and human vulnerability to environmental changes. **Prerequisite(s):** *GEOG 210 with a "C" or better and GEOG 280 with a "C" or better.*

GEOG 300. Population Geography

Credits 3.00 PeopleSoft Course ID 000921 Grading Basis GRD

An introduction to population measurement, sources of population data and modern population problems. Topics include distribution, the changing age structure and migration issues affecting the U.S. At the global scale, topics include distribution, global migration patterns, the refugee crisis and prospects for feeding the rapidly increasing human population.

GEOG 301. Introduction to Natural Disasters Response

Cross listed with: *HUMN 301*

Credits 3.00 PeopleSoft Course ID 013143 Grading Basis GRD

This course is designed to give students an overview of the various types of natural disasters; a look at the world regions that are most vulnerable to each type of disaster; and, a preview of disaster planning, management, relief and response as related to natural disasters.

GEOG 305. History and Philosophy of Geography

Credits 3.00 PeopleSoft Course ID 012225 Grading Basis GRD

Topics from the classical period to the modern period include 20th century theories and paradigm shifts involving cultural geography, physical geography, human-environment traditions, regional geographies and modeling. Diverse philosophies such as quantitative /positivist, qualitative/humanistic, social theory, and GIS are viewed for their contributions to the discipline of geography. **Prerequisite(s):** *A grade of "C" or better in GEOG 210 and GEOG 280, and junior standing or permission of the instructor.*

GEOG 308. Environment, Nature and Society

Credits 3.00 PeopleSoft Course ID 013987 Grading Basis GRD

This course focuses on the interaction and integration of human and physical environments. It uses geographical approaches to examine relationships between people and the natural world, and it explores the origins and implications of the perceived separation of humans and nature. At a variety of scales, and using case studies, issues of resource use, environmental and human vulnerability, global and local environmental change, landscape modification, and human impacts on natural systems are explored. Along with the close analysis of spatial patterns and processes in the natural world, questions of politics, economics, culture, perception, justice and ethics may be

considered in the examination of human-environment interactions.

Prerequisite(s): *GEOG 210 with a "C" or better and GEOG 280 with a "C" or better.*

GEOG 310. Environmental Issues

Credits 1.00 - 4.00 PeopleSoft Course ID 010004 Grading Basis GRD

Courses cover environmental issues such as air pollution, forest and wildlife management, water, resource management, soils and land use, and energy and the environment (among other topics). Courses examine the interface between humans and environmental systems while addressing the impact of social, economic and political systems and activities on the environment. May be repeated as course content changes.

GEOG 315. Field Studies in Geography

Credits 3.00 PeopleSoft Course ID 001821 Grading Basis GRD

This course exposes students to the methods and techniques commonly used by geographers while conducting fieldwork. The course will cover identifying and defining a researchable project, designing and testing data collection methods, and different methods of collecting, recording and presenting data. Students will also become familiar with various types of field equipment.

GEOG 320. Human Dimensions of Global Change

Credits 3.00 PeopleSoft Course ID 012226 Grading Basis GRD

This course addresses global change and human development. Conservation, sustainability and development are core themes that will be related to current changes occurring on a global scale. Global changes to be discussed in the course relate to the climate, biodiversity, natural resources and human populations. Sustainability will be introduced as a dimension of human development. **Prerequisite(s):** *GEOG 290 with a "C" or better or GEOG 308 with a "C" or better.*

GEOG 322. Agricultural Systems

Credits 3.00 PeopleSoft Course ID 010386 Grading Basis GRD

This course covers four distinct areas: the foundation of agriculture, the nature and distribution of soils on a global basis; the history of agriculture from the original selection of domestic crops to the 20th century; modern industrial agriculture and trade; and alternatives to chemical and energy intensive agriculture in the 21st century. **Prerequisite(s):** *GEOG 290 with a "C" or better, GEOG 308 with a "C" or better or permission of Instructor.*

GEOG 323. The Geography of Human Genetics, Infectious Diseases and Diet

Credits 3.00 PeopleSoft Course ID 013229 Grading Basis GRD

Throughout history, infectious diseases have profoundly affected human populations. Using a case study approach, this course will give students an opportunity to investigate social and historical aspects of infectious disease as well as the microbiology, genetics, biochemistry and medical aspects of human infectious diseases and diet.

GEOG 325. Environmental Ethics

Credits 3.00 PeopleSoft Course ID 005763 Grading Basis GRD

Examines the basic principles of resource use including geographic, economic, social and political processes. Explores concepts underlying such issues as resource consumption and conservation, environmental perception, resource and environmental conflict, population growth and control, carrying capacity, and the evolution of the environmental movement.

GEOG 327. Climatology

Credits 3.00 PeopleSoft Course ID 009267 Grading Basis GRD

The systematic study of the atmosphere with emphasis on such phenomena as temperature, pressure, humidity, air masses and fronts; the occurrence of these phenomena on a global basis; and a detailed survey of the worldwide

distribution of climate types. **Prerequisite(s):** *GEOG 210 with a "C" or better or GEOL 320*

GEOG 329. Global Climate Change

Credits 3.00 PeopleSoft Course ID 013477 Grading Basis GRD

This course examines the interrelationship of the physical nature of the climate system, climate variability and change, and human activities. Case studies (El Nino, global warming, and stratospheric ozone depletion) are used to investigate how climate affects society, how human activities affect climate, and how nonclimatic issues complicate our understanding of the relationship between climate and society. We consider how projections of future weather and climate affect decision-making. **Prerequisite(s):** *GEOG 210 with a "C" or better.*

GEOG 330. Weather, Climate and Society

Credits 3.00 PeopleSoft Course ID 014414 Grading Basis GRD

This course adopts a case study approach to explore a series of environmental hazards (e.g., ozone depletion, El Niño, abrupt climate change) as examples of risk management. For each case, students will learn the scientific principles underlying the hazard and examine how social and economic policies can be developed and implemented to mitigate the perceived risk.

GEOG 331. Geography of Virginia

Credits 3.00 PeopleSoft Course ID 014024

The course will examine the human and physical geography of the development of modern-day Virginia, providing an overview of its prehistory, then tracing its development from the beginning of the seventeenth century through the present. The course will include an analysis of Virginia's population, resources, and regional landscapes as they have been influenced by physical, cultural, historical, and economic factors. The relationship of Virginia to the rest of the world will also be examined.

GEOG 332. Geography of Europe

Credits 3.00 PeopleSoft Course ID 008782 Grading Basis GRD

Geographic assessment of regional and national characteristics of the European nations.

GEOG 334. Geography of East and Southeast Asia

Credits 3.00 PeopleSoft Course ID 004001 Grading Basis GRD

A survey of the physical and cultural environments of China, Taiwan, Japan, the Koreas, Indochina and the countries of Southeast Asia. Topics covered include weather and climate, physiography, natural resources, population characteristics, political systems, aspects of the economy and the role that each country plays on the regional and world stage.

GEOG 335. Geography of Africa

Credits 3.00 PeopleSoft Course ID 007179 Grading Basis GRD

An introduction to the regional geography of Sub-Saharan Africa that examines the physical geography of the continent, the historical roots of its present political geography, the consequences of its colonial past on communities and cultures as well as its natural resources. Students will examine continental issues such as resource management, food production, hunger, disease patterns and management of wildlife.

GEOG 336. Environmental Hazards: A Focus on Southeast Asia

Credits 3.00 PeopleSoft Course ID 013478 Grading Basis GRD

This course will focus on interactions between earth surface systems and social environments to demonstrate the complexity of natural hazards, and particularly those of Southeast Asia. Through regional geography, students will learn differing adaptation mechanisms of societies and cultures unique to the area and some of the natural hazards within the region.

GEOG 337. Geography of Latin America

Credits 3.00 PeopleSoft Course ID 009896 Grading Basis GRD

A study of countries in Latin America which includes their physical landforms, weather and climate, biogeography, natural resource base, attitudes toward the physical environment, characteristics of the economy, the current political role in international activities, and population characteristics that include growth rate, distribution, migration and ethnicity.

GEOG 338. Geography of the Philippine Islands: Problems and Possibilities

Credits 3.00 PeopleSoft Course ID 012227 Grading Basis GRD

Exploration of the Philippines focuses on poverty, environmental conservation, resource exploitation and ecosystem degradation in upland and marine environments. Topics include population dynamics, political pressure and instability, and urban challenges. The future of the country is investigated on all geographic scales with regard to its role in a globalized world economy.

GEOG 339. Geography of the Caribbean

Credits 3.00 PeopleSoft Course ID 012967 Grading Basis GRD

This course is designed to give students a general geographical overview of the islands states and territories surrounded by the Caribbean Sea. Students will study physical landforms, weather and climate, environmental issues, population characteristics, history, local and regional politics, and economic aspects of political units in the region.

GEOG 340. Biogeography

Credits 3.00 PeopleSoft Course ID 002173 Grading Basis GRD

This course emphasizes geographical biogeography and is as an advanced physical geography class. Included are analyses of spatial patterns of biota from local to global scales and examinations of the systems and processes that result in spatial and temporal patterns of species existence and diversity, community composition, energy pathways, adaptive traits, and human influences on biotic systems and processes. **Prerequisite(s):** *GEOG 210 with a "C" or better*

GEOG 341. Wilderness Techniques

Credits 3.00 PeopleSoft Course ID 008619 Grading Basis GRD

Wilderness legislation, legal mandates and wilderness issues are examined. Human impacts due to overuse or conflicting uses are studied, as are the philosophical aspects of wilderness ethics. This course is taught entirely in the field. Camping and hiking are required. **Prerequisite(s):** *Permission of the instructor.*

GEOG 342. Management and Protection of Natural Resources

Credits 3.00 PeopleSoft Course ID 011371 Grading Basis GRD

This course provides a managerial perspective for protection and management of natural resources. A systems approach for applied management strategies is provided for aquatic, terrestrial, threatened and endangered ecosystems. Topics include application of state, federal, international laws, regulations, policies and guidelines. Students develop management plans and explore jurisdictional resource protection issues. **Prerequisite(s):** *Junior or senior standing only.*

GEOG 343. Wildlife Management

Credits 3.00 PeopleSoft Course ID 011372 Grading Basis GRD

An introductory discussion of applied management strategies for wildlife species and their ecological requirements is provided relative to human influences. Management techniques that are useful for determining population or health status are demonstrated for select vertebrate species. The evolution of wildlife laws, policies and management strategies are addressed to provide relevant awareness into the appropriate concepts of wildlife management.

Prerequisite(s): *Junior or senior standing only.*

GEOG 344. Globalization and Development

Credits 3.00 PeopleSoft Course ID 011015 Grading Basis GRD

An overview of the classification of economic activities, the factors involved in the location of various types of economic activities and the regional variation in the standard of living associated with economic development. Additional topics include regional economic growth and types of economic systems and development perspectives, the roles that politics and demographics play in the economic development of a country, and the globalization of economic activities.

GEOG 345. Geography of Poverty

Credits 3.00 PeopleSoft Course ID 003266 Grading Basis GRD

This course provides a geographical perspective on poverty faced by communities and countries of the world today. The focus is on how poverty is defined, measured and mapped, the causes and impacts of poverty, theories for ending poverty and organizations that work to address poverty. It includes a geographical study of communities and countries that have successfully alleviated extreme poverty.

GEOG 348. Indigenous Geographies

Credits 3.00 PeopleSoft Course ID 013479 Grading Basis GRD

This course introduces indigenous geographic representations. Topics include territorial sovereignty, traditional resource use, sustainable development and protection of sacred sites. Students will explore the central geographic practice of cartography, which has taken on new meaning as cultural identification for Indigenous peoples. The use of new technologies to represent traditional understandings of Earth is also explored. **Prerequisite(s):** GEOG 280 or permission of the instructor.

GEOG 350. Topics in Geography

Credits 1.00 - 3.00 PeopleSoft Course ID 008965 Grading Basis GRD

Examination of geographic topics that are of current interest. Can be repeated as course content changes. **Prerequisite(s):** GEOG 200 or GEOG 210 or GEOG 215 or GEOG 280, or permission of the instructor.

GEOG 355. Global Positioning Systems

Credits 3.00 PeopleSoft Course ID 013957 Grading Basis GRD

This course provides fundamental and advanced instruction in global positioning systems (GPS) technology. Topics include the history and development of GPS, system operation, the integration of satellite and ground components, applications and visualization. Active learning allows students to operate different models of receivers, minimize field error, gather and differentially correct data, and import the finished project into a GIS for further analysis. Students will form teams to design, execute and present a formal project to a client.

GEOG 360. GIS for Humanitarian Assistance

Cross listed with: HUMN 360.

Credits 3.00 PeopleSoft Course ID 013144 Grading Basis GRD

In responding to humanitarian crises, governments and aid organizations must deploy aid workers, deliver essential services, set up temporary settlements, and distribute items such as water and food that are needed for survival. Spatial analysis and maps are critical to the success of these efforts. In this course, students learn the basics of Geographic Information Systems (GIS) for humanitarian assistance and learn how relief organizations use GIS in their work. **Prerequisite(s):** GEOG 215.

GEOG 365. Cartography and Geospatial Visualization

Credits 3.00 PeopleSoft Course ID 004379 Grading Basis GRD

This course examines the fundamentals of visualizing spatial data in static and dynamic environments. Students will learn about cartographic design, thematic cartographic techniques, developing spatial data from non-spatial information and with GPS equipment, and geographic visualization. Students will also

develop a portfolio of hard copy and soft copy visualizations. **Prerequisite(s):** GEOG 215 with a "C" or better.

GEOG 366. Intermediate Geographic Information Science

Credits 3.00 PeopleSoft Course ID 001477 Grading Basis GRD

An in-depth course in geographic information science and its role in technology and society. Spatial databases and descriptive data will be created and implemented into various geographic information systems. Advanced operations will be used to explore the analysis capabilities of geographic information systems. **Prerequisite(s):** Prerequisites: GEOG 215 with a "C" or better or GEOG 161 and permission of the instructor.

GEOG 367. Programming for Geographic Information Science

Credits 3.00 PeopleSoft Course ID 014357 Grading Basis GRD

Geographic information science relies on programming for effective geospatial analysis for large datasets and the automation of resource-intensive analytical methods. This course advances the knowledge of programming for geographic information systems. In addition to providing a solid foundation in Python programming language, the course introduces several libraries and applications that are commonly used for working with geospatial data in GIS software.

Prerequisite(s): GEOG 215 and GEOG 216, or permission of the instructor.

GEOG 375. Political Geography

Cross listed with: IA 375

Credits 3.00 PeopleSoft Course ID 001675 Grading Basis GRD

Geopolitical conflicts and issues are examined. Concepts such as territoriality, nationalism, religious and ethnic struggle, environmental degradation, and freedom and justice are discussed in the context of political unrest. Significant geopolitical theories and social and economic processes are explored.

GEOG 376. Urban Geography

Credits 3.00 PeopleSoft Course ID 000322 Grading Basis GRD

Study of the city in its geographic setting, giving perspective of modern urban problems, origin and growth of cities and influence of location on city functions. Looks at the internal structure of cities and the influence of the internal structure on its population groups. **Prerequisite(s):** GEOG 290 or permission of instructor.

GEOG 377. Feminist Geography

Credits 3.00 PeopleSoft Course ID 014409 Grading Basis GRD

This course introduces the field and practice of feminist geography with emphasis on understanding gender and other social categories such as race, class and sexuality through a geographic perspective. Concepts and topics examined include the relationship of such identities to spatial politics, culture, knowledge and social justice. **Prerequisite(s):** GEOG 200 or GEOG 210 or GEOG 215 or GEOG 280, or permission of instructor.

GEOG 380. Cultural Geography

Credits 3.00 PeopleSoft Course ID 012228 Grading Basis GRD

Introduction to cultural geography with emphasis on diversity of language, religion and folklore, as well as culture traits and practices and their historical diffusion. Ties to livelihood, the rural-urban continuum and demographic change are explored, as are foci on philosophy, power, race, class and gender. Exploitation and sustainability will be introduced as dimensions of cultural and environmental interaction.

GEOG 385. Principles of Remote Sensing

Credits 3.00 PeopleSoft Course ID 009906 Grading Basis GRD

This course is an introduction to remote sensing, the study of images and other types of data acquired by satellites and aircraft. Topics include the principles underlying multiple types of remote sensing, the properties of common data

types, making measurements using aerial photographs, basic digital image processing, and applications. **Prerequisite(s):** *GEOG 216 with a "C" or better*

GEOG 390. Practicing Geographic Science

Credits 1.00 PeopleSoft Course ID 009863 Grading Basis GRD

Professional development for students in geography. Educational opportunities and career options. Library and literature research skills. **Prerequisite(s):** *Junior standing.*

GEOG 406. Forest Inventory: A Geospatial Approach

Credits 3.00 PeopleSoft Course ID 013480 Grading Basis GRD

This course teaches forest measurement at the tree, plot, stand, and forest levels. It includes heights, stem diameters, volumes and biomasses of individual trees; fixed and variable radius plots; basal area estimates; sampling designs, and stand and stock table construction. Students learn how geospatial technologies can be used to collect data on forests, make forest inventories more accurate and precise, and assist in performing forest-related analyses and visualizations. **Prerequisite(s):** *GEOG 215 with a "C" or better, GEOG 216 with a "C" or better and an introductory course in statistics (MATH 220, ISAT 251, COB 191 or equivalent), or permission of instructor.*

GEOG 410. Geography and Film

Credits 3.00 PeopleSoft Course ID 013481 Grading Basis GRD

This course is concerned with the intersection of geography and film. An always-present undercurrent focuses on films whose location and/or culture are an essential backdrop in the cinematic experience. **Prerequisite(s):** *GEOG 290, GEOG 308 or permission of instructor.*

GEOG 415. Environment, Landscape and Culture

Credits 3.00 PeopleSoft Course ID 013482 Grading Basis GRD

This seminar analyzes human-environment interactions as shaped by cultural perceptions, past events and ecological processes. Place-based and interdisciplinary, landscape studies focus on the unique circumstances of a location and shift temporal and geographic scales to achieve broader understandings of cultural and ecological adaptation and resilience. Methods of historical ecology and field research are introduced. Regional projects underscore readings and research assignments. **Prerequisite(s):** *GEOG 290, GEOG 308 or permission of instructor.*

GEOG 427. Water Resources of the World

Credits 3.00 PeopleSoft Course ID 013645 Grading Basis GRD

Humans face water challenges that can be understood through the lens of geography. Students will study different physical aspects of Earth's water, including the hydrologic cycle, climate controls of precipitation, river basin hydrology, water quality and availability, and aquatic ecosystems. The course investigates human dimensions of water such as economics, disease, management and planning, conflict, and the future of water resources.

Prerequisite(s): *GEOG 210 or permission of the instructor.*

GEOG 429. Sustainability: An Ecological Perspective

Cross listed with: *ISAT 429*

Credits 3.00 PeopleSoft Course ID 011555 Grading Basis GRD

This course examines present global environmental impacts and efforts made to change production and consumption patterns toward those that reduce impact on ecosystems or promote increased ecosystems health. The focus lies in understanding the basic resources of productivity including soils, agricultural systems, agroforestry, forestry and aquatic environments and applying solutions on a personal and community level. **Prerequisite(s):** *GEOG 290, GEOG 308 or permission of the instructor.*

GEOG 430. Dynamics of the Atmosphere

Credits 3.00 PeopleSoft Course ID 014415 Grading Basis GRD

This course provides an integrated view of atmospheric science with a focus on the structure, evolution and dynamics of mid-latitude weather systems. Topics include the theoretical development of conceptual models and analysis techniques for synoptic waves, cyclones, fronts, jets and regional precipitation events. **Prerequisite(s):** *Either GEOG 327, GEOG 329, or GEOG 330; or permission of instructor.*

GEOG 440. Advanced Biogeography

Credits 3.00 PeopleSoft Course ID 013646 Grading Basis GRD

This course emphasizes physical and human-oriented processes that influence Earth's biodiversity. It addresses how human constructs influence what is known about biodiversity and the conservation of biodiversity. It introduces human challenges that are causing a decline in biodiversity and resultant impacts on human quality of life. The course builds on knowledge from prerequisites and will be taught through a current biogeography theme such as biodiversity in a changing world, applied island biogeography, biodiversity conservation at multiple scales or other pertinent themes. **Prerequisite(s):** *GEOG 290 or GEOG 308; GEOG 340.*

GEOG 447. Climates Through Time

Credits 3.00 PeopleSoft Course ID 014464 Grading Basis GRD

This course is a geographic exploration of basic controls of climate, the world's climate regions, global circulation models and the worldwide collection of data. Students will investigate climate change for various places on the surface of the Earth by analyzing atmospheric data from online sources. They will also explore historic patterns of extreme weather events through review of material in the scientific literature and in news reports. Finally, students will investigate what scientists are predicting for the future for the places under study. As a project-driven course, students will formally present their research at the end of the semester. **Prerequisite(s):** *GEOG 210 and GEOG 327 or permission of instructor.* **Corequisite(s):** *GEOG 327.*

GEOG 464. Cartographic Design

Credits 3.00 PeopleSoft Course ID 014568 Grading Basis GRD

This course focuses on learning innovative mapping techniques and exploring different forms of traditional and interactive map design. It addresses the mapping styles and techniques of expert cartographers and focuses on advanced techniques for map composition, feature symbology, terrain representation and web mapping. With more time dedicated to each project, the course will be conducted in a workshop setting for students to share their ideas with one another and get more in-depth feedback as they move forward.

Prerequisite(s): *GEOG 365, or permission of the instructor.*

GEOG 465. Topics in GIS

Credits 3.00 PeopleSoft Course ID 011013 Grading Basis GRD

The course examines varying topical issues in geographic information science. The course may be repeated as course topics vary. **Prerequisite(s):** *GEOG 366 or permission of the instructor.*

GEOG 466. GIS and Geographic Databases

Credits 3.00 PeopleSoft Course ID 001392 Grading Basis GRD

An introduction to the creation, use and management of digital spatial data used by industry and government. Integration of large spatial data sets into the geographic information system, data management and data exchange, and the geodetic transformation of data sets are emphasized. Digital elevation models, land use data, population data, digital topographic map and street network data will be used. **Prerequisite(s):** *GEOG 366 or permission of the instructor is the prerequisite.*

GEOG 467. GIS Project Management

Credits 3.00 PeopleSoft Course ID 008796 Grading Basis GRD

An introduction to geographic information systems (GIS) project management. Basic project management techniques will be applied by defining, designing, implementing and documenting a geographic information system.

Prerequisite(s): *GEOG 366 or permission of the instructor.*

GEOG 468. Internet Geographic Information Systems

Credits 3.00 PeopleSoft Course ID 011012 Grading Basis GRD

Theoretical and practical exploration of methods, standards and policies related to the development and utilization of geographic information systems on the Internet. Students will create and utilize distributed geospatial data and analytical systems using the World Wide Web and the Internet to address geographical problems. **Prerequisite(s):** *GEOG 365 or GEOG 366.*

GEOG 469. Applications of Geographic Information Systems

Credits 3.00 PeopleSoft Course ID 012229 Grading Basis GRD

The course advances the knowledge of GIS in theory and practice by focusing on specific application areas. Spatial databases and complex attribute data will be created, and GIS modeling techniques will be used to solve problems relevant to the specified topical area. The course may be repeated once for additional credit when the topic changes. **Prerequisite(s):** *GEOG 366 or permission of the instructor.*

GEOG 470. Senior Seminar in Environmental Conservation, Sustainability and Development

Credits 3.00 PeopleSoft Course ID 012230 Grading Basis GRD

This capstone seminar integrates the student's previous class experiences to provide a holistic exploration of linkages between environmental conservation and human development status and strategies through in-depth analysis of compelling human-environment issues. Topics vary by semester and include environmental politics, global perspectives on population, sustainable communities and global biodiversity. For majors and minors only.

Prerequisite(s): *Senior standing and either GEOG 290 or GEOG 308.*

GEOG 476. Sustainable Cities Seminar

Credits 3.00 PeopleSoft Course ID 013647 Grading Basis GRD

This seminar explores ways to make cities more environmentally, socially and economically sustainable. Students will study key urban sustainability principles, examine global case studies, undertake local fieldwork and pursue projects developing interventions in real-world city settings. The course emphasizes a geographical approach in addressing urban human and environmental challenges. **Prerequisite(s):** *GEOG 290 or GEOG 308.*

GEOG 477. Gendered Geographies

Credits 3.00 PeopleSoft Course ID 014416 Grading Basis GRD

This course examines the gendered nature of local, global and everyday geographies. Concepts and theories explored emphasize how gender and other social categories such as race, class and sexuality intersect with geographic concepts of space, place and scale. Specific topics may vary by semester and emphasize human, human-environment or other geographic foci.

Prerequisite(s): *Senior standing and either GEOG 308 or GEOG 377, or permission of instructor.*

GEOG 485. Processing Remotely Sensed Data

Credits 3.00 PeopleSoft Course ID 003112 Grading Basis GRD

This course focuses on computer-based techniques for processing remotely sensed data and applications of these techniques. Subjects covered will include geometric and radiometric correction, image enhancement, data transformations, change detection and quantification, and classification. Both traditional techniques and techniques designed for newly available data types will be examined. **Prerequisite(s):** *GEOG 385 or permission of the instructor.*

GEOG 490. Senior Research or Field Practicum

Credits 3.00 PeopleSoft Course ID 005174 Grading Basis GRD

Working with a research adviser, student completes an internship, a study abroad program, or project research. Student delivers interim progress reports and an annotated bibliography or other relevant research products. May be repeated once. **Prerequisite(s):** *GEOG 390 and permission of research adviser.*

GEOG 491. International Studies

Credits 1.00 - 3.00 PeopleSoft Course ID 007194 Grading Basis GRD

Student will make arrangements for the international experience. A research project or work-study project will be designed by the student and faculty member prior to departure. The research of work will be carried out in the country of travel. May not be taken for capstone credit. Project must be approved by GS faculty. May be repeated for credit.

GEOG 495. Internship in Geography

Credits 3.00 - 6.00 PeopleSoft Course ID 002121 Grading Basis GRD

Practical experience within a public agency, non-profit or private business utilizing geographic methodology. Work experience will be supervised by an official of the business or agency and a faculty member. Periodic seminars and written reports are required. **Prerequisite(s):** *Permission of the faculty sponsor and the GS Program Operations Manager. May not be taken for capstone credit.*

GEOG 497. Independent Study

Credits 3.00 PeopleSoft Course ID 013010 Grading Basis GRD

Student performs an independent research project, either alone or within an investigative team, to identify and analyze a problem from a geographic perspective. May be taken for repeated credit. May not be taken for capstone credit.

GEOG 499 A, B, C. Honors in Geography

Credits 1.00 - 3.00 PeopleSoft Course ID 005423 Grading Basis GRD

Prerequisite(s): *Year course.*

Geology

GEOL 102. Environment: Earth [C3NS]

Credits 3.00 PeopleSoft Course ID 010470 Grading Basis GRD

A study of geological processes causing global change and their impact on human thought. The relationship between some geological processes and life on the Earth is also considered. Not available for major or minor credit in geology. Students may not receive credit for both GEOL 102 and ISCI 102.

GEOL 110. Physical Geology [C3NS]

Credits 3.00 PeopleSoft Course ID 007497 Grading Basis GRD

A systematic study of earth materials and the internal and external processes that affect earth structure and landforms. Topics include the genesis/properties of rocks and minerals, plate tectonics, and the agents of change that drive surface processes and land form development. The laboratory and lecture portions of GEOL 110 must be taken concurrently. **Corequisite(s):** *GEOL 110L.*

GEOL 110L. Physical Geology Laboratory [C3L]

Credits 1.00 PeopleSoft Course ID 009095 Grading Basis GRD

This laboratory course is designed to complement and supplement the GEOL 110 course. The laboratory and lecture portions must be taken concurrently.

Prerequisite(s): *GEOL 110 or permission of the instructor.*

GEOL 115. Earth Systems and Climate Change [C3NS]

Credits 3.00 PeopleSoft Course ID 001561 Grading Basis GRD

This course explores cycles, trends and abrupt events in the Earth system. Analyses of the geologic record and global climate models provide perspective for understanding paleoclimate and future climate changes, including global warning. Current hypotheses for causes of climate change are evaluated, including plate tectonics, orbital cyclicity, variations in the sun's strength

and human activities. The two reoccurring questions of this class are: What are Earth's climate stories? How do we know?

GEOL 115L. Earth Systems and Climate Change Lab [C3L]

Credits 1.00 PeopleSoft Course ID 014176 Grading Basis GRD

In this course students will explore interactions between Earth's climate and humans through the framework of Earth systems science. Students will work with data and models to learn about the components of the climate system, climate change in the past and projections for climate in the future. In addition, students will examine the important roles that the cycling of carbon, water and energy have in the Earth's climate system. **Prerequisite(s):** GEOL 115. **Corequisite(s):** GEOL 115.

GEOL 167. History and Philosophy of the Geosciences

Credits 3.00 PeopleSoft Course ID 011839 Grading Basis GRD

As an introductory experience in the Bachelor of Arts in Earth Science, students will be inculcated in the philosophy of geosciences as an interdisciplinary medium for extending classical science viewpoints to complex earth systems. Students will study the geosciences as distinct among sciences, establishing relevance and value of earth science literacy in professional and personal settings.

GEOL 210. Applied Physical Geology [C3NS]

Credits 3.00 PeopleSoft Course ID 005468 Grading Basis GRD

A problem-based study of earth materials and the processes that affect earth structure and landforms. Topics include plate tectonics, the genesis/properties of rocks and minerals, and agents of change that drive surface processes and landform development. Quantitative problem-solving skills will be applied to case studies that address 3D visualization and time-based processes, such as earth materials, solid earth and surface processes, natural hazards and engineering applications. May be used for general education credit.

GEOL 211. Introduction to Oceanography [C3NS]

Credits 3.00 PeopleSoft Course ID 000368 Grading Basis GRD

An introduction to the oceanography of coastal environs including barrier islands, estuaries and tidal marshes. The physical, geological and biochemical characteristics of coastal waters will be discussed in the context of the economic and social pressures brought to bear on these areas by an increasing global population. Cannot receive credit for both GEOL 211 and GEOL 401. May be used for general education credit.

GEOL 230. Evolution of Earth (3, 2)

Credits 4.00 PeopleSoft Course ID 000417 Grading Basis GRD

An introduction to the evidence, methods and assumptions used by scientists to unravel the Earth's origin and history. Emphasis on rock analysis/interpretation, modern and ancient processes of mountain building, origin and evolution of life and the history of the North American continent.

Prerequisite(s): GEOL 110L or GEOL 115L or permission of the instructor.

GEOL 280. Mineralogy (3, 2)

Credits 4.00 PeopleSoft Course ID 007567 Grading Basis GRD

A comprehensive study of minerals, including crystallography, mineral chemistry, x-ray diffraction, mineral optics with thin section recognition using petrographic microscope and hand specimen identification of both silicate and non-silicate minerals. **Prerequisite(s):** GEOL 110L or GEOL 115L or CHEM 131.

GEOL 291. Writing and Communicating in the Geosciences

Credits 1.00 PeopleSoft Course ID 012686 Grading Basis GRD Must take prior to senior year.

This course prepares students for independent research by providing them the fundamental skills in literature searches, writing, critical reading and

communication in the geosciences. **Prerequisite(s):** GEOL 110L or GEOL 115L or GEOL 102.

GEOL 300. Introduction to Petrology (3, 3)

Credits 4.00 PeopleSoft Course ID 008508 Grading Basis GRD

Igneous and metamorphic processes are explained using crystallization theory, phase diagrams, thermodynamics and geochemistry. The laboratory study of rocks, their chemical and mineralogical signatures, and their geologic origins will be explored. **Prerequisite(s):** GEOL 110L or GEOL 115L, and GEOL 280 and CHEM 131; or permission of instructor.

GEOL 301. Earth Science for Teachers

Credits 4.00 PeopleSoft Course ID 011766 Grading Basis GRD

Earth science content is blended with a systems approach to provide pre-service teachers with an understanding of how the Earth works, as well as strategies for teaching it. Major content themes include reconstructing the geologic history of the mid-Atlantic, exploring the interaction of living things and the environment, and predicting how matter and energy circulate in the earth system.

GEOL 302. Sedimentary Petrology

Credits 1.00 PeopleSoft Course ID 013227 Grading Basis GRD

This is a course about sedimentary rocks in hand sample and thin section. With the polarizing microscope, students will study thin sections of outcrop and core samples. They will identify common minerals, textures and fabrics. They will identify the four components of all sedimentary rocks (framework grains, cements, matrix, pore types) and will make qualitative and quantitative measurements at a fundamentally different scale than is possible with just a field study of sedimentary rocks. **Prerequisite(s):** GEOL 300 or permission of the instructor. **Corequisite(s):** GEOL 300 or permission of the instructor.

GEOL 307. Planetary Geology (2, 2)

Credits 3.00 PeopleSoft Course ID 003937 Grading Basis GRD

This course surveys currently developing ideas in planetology including origin of the planets, meteorites and planetary interiors. Also included are geologic processes and land forms on the moon and terrestrial planets, their modification under various planetary environments, and analogies to familiar earth land forms. Includes laboratory. **Prerequisite(s):** GEOL 110L or GEOL 115L.

GEOL 310 A - D. Environmental Impact

Credits 2.00 - 3.00 PeopleSoft Course ID 003893 Grading Basis GRD

Focuses on a selected environmental realm. The course will examine the interface between human activities and environmental systems. It will address the impacts of social, economic and political activities on the environment. A-Atmosphere (air pollution); B-Biosphere (vegetation/wildlife); C-Hydrosphere (water); D-Lithosphere (geologic hazards/land issues).

GEOL 320. Meteorology

Credits 3.00 PeopleSoft Course ID 000936 Grading Basis GRD

A survey of the science of weather including weather forecasting, weather maps and related atmospheric processes. Emphasis is placed on the dynamic aspects of meteorology and the interrelationships of atmospheric phenomena with land masses and the world ocean.

GEOL 350. Paleobiology (3, 2)

Cross listed with: BIO 350

Credits 4.00 PeopleSoft Course ID 009946 Grading Basis GRD

The evolution and ecological structure of the biosphere from the origin of life to the present, emphasizing the evolution and paleobiology of animal life as shown by the fossil record. Lectures discuss methods used to interpret the fossil record and cover topics such as phylogeny and systematics, functional

morphology, biostratigraphy, paleoecology, evolution and extinction. Laboratories focus on the major groups of invertebrates that are common in the geologic record. **Prerequisite(s):** GEOL 230, BIO 150/BIO 150L or permission of instructor.

GEOL 355. Geochemistry of Natural Waters

Cross listed with: CHEM 355

Credits 3.00 PeopleSoft Course ID 009371 Grading Basis GRD

Study of chemical theory and reactions important in natural water systems. The role of atmospheric, geologic and biological inputs in determining the geochemistry of streams, rivers and oceans. **Prerequisite(s):** CHEM 131 and CHEM 132 or equivalent.

GEOL 360. GIS for the Geoscientist

Credits 3.00 PeopleSoft Course ID 013894 Grading Basis GRD

This course is designed to help students master practical geospatial skills helpful for an entry-level job or graduate school in the geosciences.

GEOL 365. Structural Geology

Credits 4.00 PeopleSoft Course ID 010414 Grading Basis GRD

Students will study major and minor structures of the Earth's crust. Mechanical principles involved in folding, faulting, jointing and penecontemporaneous structures. The causes and results of mountain building processes. Preparation and interpretation of geologic maps. **Prerequisite(s):** GEOL 110L or GEOL 115L.

GEOL 367. Genesis of Solid Earth Materials (3, 2)

Credits 4.00 PeopleSoft Course ID 011838 Grading Basis GRD Not acceptable for B.S. in geology.

This course addresses the natural relationship between minerals and the rocks they make up. Using the concept of mineralizing environments, illustrated by classic examples, students will investigate minerals through the processes of mineral genesis and associated rock types. This approach provides insight and predictive value for natural conditions in which specific minerals and rocks occur. **Prerequisite(s):** GEOL 110L or GEOL 115L.

GEOL 377. Earth Surface Processes (2, 2)

Credits 3.00 PeopleSoft Course ID 011837 Grading Basis GRD

The interrelationships among climate, landscapes, soils and bedrock geology are examined using the mid-Atlantic region as a conceptual laboratory. Course instruction includes lecture, laboratory and field trip meetings. The processes of rock weathering and erosion and soil formation are reinvestigated. Topographic maps and aerial photography are examined for landforms and landscape evolution. **Prerequisite(s):** GEOL 110L or GEOL 115L or GEOL 210, or permission of the instructor.

GEOL 380. Genetic Mineralogy (2, 2)

Credits 3.00 PeopleSoft Course ID 009871 Grading Basis GRD

A study of mineral genesis. Emphasis is directed toward mineralogical environments, mineral associations and the geology/mineralogy of classical localities. An appreciation of mineral value and aesthetics is incorporated throughout the course. **Prerequisite(s):** GEOL 280.

GEOL 387. Stratigraphy, Structure and Tectonics (3, 2)

Credits 4.00 PeopleSoft Course ID 011836 Grading Basis GRD

Examination of how stratigraphic, structural and tectonic principles control the character and distribution of rocks. Study of principles, regional patterns in sedimentary rocks and stresses that deform rocks are explored in laboratory and field exercises. Topics and techniques are discussed within the framework of the 1.2 billion-year geologic history of the VA region and its connection with tectonic processes throughout the rest of the world. **Prerequisite(s):** GEOL 110L or GEOL 115L or GEOL 230.

GEOL 388. Advanced Structure, Stratigraphy, Tectonics (3,2)

Credits 4.00 PeopleSoft Course ID 013584 Grading Basis GRD

Advanced concepts in structural geology (analyses of rheology, stress & strain, deformation fabrics, and chronologic constraints) applied to the tectonic evolution of orogens and basins. This will include exploration of the mechanisms controlling the stratigraphic record (auto- and allogenic mechanisms and sequence theory) of basins, as well as methods of dating the stratigraphic record (biofacies and biostratigraphy, geochronology and chronostratigraphy, and magneto and chemostratigraphy). **Prerequisite(s):** *Prerequisite: GEOL 387.*

GEOL 390. Laboratory Techniques in Geology (2, 2)

Credits 3.00 PeopleSoft Course ID 002729 Grading Basis OPT

An elective course for science majors. A study of the basic theories and techniques of laboratory methods and instrumentation. Implementation and application of techniques to geological problems. **Prerequisite(s):** GEOL 280 or permission of the instructor

GEOL 398. Topics in Geology

Credits 1.00 - 4.00 PeopleSoft Course ID 001302 Grading Basis GRD

Topics in geology at the advanced level. May be repeated for credit when course content changes. Topics selected may determine prerequisites. Students should consult the instructor prior to enrolling in the course.

Prerequisite(s): *Permission of the instructor.*

GEOL 399. Field Geology

Credits 3.00 - 6.00 PeopleSoft Course ID 009366 Grading Basis GRD

Field Geology is the capstone course for geology majors. Students learn to recognize and interpret a wide variety of rocks and structures, as well as geomorphic, hydrologic and other geologic features. Methods of mapmaking, data recording and report preparation are emphasized. Projects from one to five days' duration are conducted in regions where igneous, metamorphic, and sedimentary rocks, surficial deposits, and karst features are well-exposed.

Prerequisite(s): GEOL 300 and GEOL 387 or permission of the instructor.

GEOL 400. Geology and Ecology of the Bahamas

Cross listed with: BIO 400

Credits 3.00 PeopleSoft Course ID 012727 Grading Basis GRD

This course explores the geology and ecology of the shallow-water marine environment by examining the preeminent modern example, the Bahamas platform. The Bahamas provide an excellent model for understanding modern and ancient carbonate and reef deposits and a variety of terrestrial/aquatic habitats. Biological processes are responsible for many of the geological features of the Bahamas, so the course considers the biology/ecology of marine organisms in addition to geological topics. **Prerequisite(s):** GEOL 110L or GEOL 115L or GEOL 211 or a 200- level GEOL or BIO course; at least four hours of additional lab science, at least sophomore status, and permission of the instructor.

GEOL 401. Oceanography for Teachers

Credits 3.00 PeopleSoft Course ID 012927 Grading Basis GRD

A comprehensive study of the world's oceans and the interrelationships among physical, chemical, biological and geological oceanography for pre- and inservice teachers. Special emphases on Virginia coastal oceanography, the National Ocean Literacy Principles and the integration of pedagogy applicable to K-12 instruction. Includes a field trip to the Virginia coast. Credit may not be earned in both GEOL 211 and GEOL 401.

GEOL 405. Vertebrate Paleontology

Cross listed with: BIO 405

Credits 3.00 PeopleSoft Course ID 001882 Grading Basis GRD

A study of the origin and evolution of the vertebrates. Emphasis will be on understanding how the processes of earth evolution and biological evolution have interacted through time to produce a coherent picture of vertebrate history. **Prerequisite(s):** GEOL 230, BIO 150/BIO 150L or permission of instructor.

GEOL 406. Paleoclimatology and Paleoceanography

Credits 3.00 PeopleSoft Course ID 013223 Grading Basis GRD

Investigate the methodologies and data used to reconstruct Earth's climate history. Emphasis will be placed on the marine sediment records of the Cenozoic through detailed lecture, lab activities and course-based original research. Case studies include the Paleocene Eocene Thermal Maximum, the glaciation of Antarctica, Milankovitch cyclicity and Northern Hemisphere glaciation. **Prerequisite(s):** GEOL 211, GEOL 230 or BIO 354, or permission of instructor.

GEOL 410. Engineering Geology (2, 2)

Credits 3.00 PeopleSoft Course ID 003641 Grading Basis GRD

Study of the applications of geology to engineering practice. Topics include soil mechanics, foundations, engineering classification of soils, slope stability and mineral aggregates. **Prerequisite(s):** GEOL 110L or GEOL 115L or GEOL 210 or GEOG 210, and MATH 231 or MATH 235 or equivalent.

GEOL 430. Environmental Soil Science (2, 2)

Credits 3.00 PeopleSoft Course ID 002238 Grading Basis GRD

The origin, distribution, and chemical, biological, and physical properties of soil are introduced. Processes responsible for soil properties are emphasized. Field trips highlight the sustainability of soils, their distribution across the Shenandoah Valley and their role in biogeochemical cycles. **Prerequisite(s):** GEOL 110L or GEOL 115L or GEOL 210, or permission of the instructor may be granted for students with four hours of a lab course.

GEOL 440. Geophysics (3, 2)

Cross listed with: PHYS 440

Credits 4.00 PeopleSoft Course ID 007240 Grading Basis GRD

This course provides a survey of geophysical methods, with joint attention on near-surface and solid earth applications. Topics include seismology, heat flow, gravity, magnetism, electrical methods, ground penetrating radar and geophysical aspects of plate tectonics. Labs focus on practical experience with data acquisition, reduction and interpretation and are a combination of field, classroom and computational activities. **Prerequisite(s):** GEOL 110L or GEOL 115L, or PHYS 140 and PHYS 150, or PHYS 240 and PHYS 250; or permission of the instructor.

GEOL 442. Field Geophysics

Credits 3.00 PeopleSoft Course ID 012926 Grading Basis GRD

This course focuses on collection of geophysical data in the field and interpretation, analysis and technical reporting afterward. Case studies discussed include applications to geology, archaeology and engineering. Students will get hands-on experience with geophysical equipment and an understanding of how and where these tools can be applied. Topics include ground penetrating radar, electrical resistivity, magnetism, seismic refraction and location (GPS and/or total station) data. **Prerequisite(s):** GEOL 110 or GEOL 115L or GEOL 210 or ANTH 197 or consent of instructor.

GEOL 460. Hydrogeology (2, 2)

Credits 3.00 PeopleSoft Course ID 005661 Grading Basis GRD

Basic concepts of subsurface water as a part of the hydrologic cycle. Topics include storativity and permeability in porous media, principles of flow, computer applications, groundwater exploration, and mapping and

environmental aspects of groundwater. **Prerequisite(s):** GEOL 110L or GEOL 115L, or permission of the instructor.

GEOL 477. Contemporary Issues in the Geosciences

Credits 4.00 PeopleSoft Course ID 011835 Grading Basis GRD

As a capstone experience, this course serves as an opportunity for students to view issues of the Earth system from an Earth-based perspective. Building on previous course work in the major (physical geology, meteorology, oceanography, etc.), students will investigate such issues as global warming, population and sustainable development and environmental ethics. Particular emphasis is placed upon the Earth's perspective from a historical viewpoint. **Prerequisite(s):** GEOL 211, GEOL 320, GEOL 367 and GEOL 377

GEOL 489. Quantitative Methods in Geology

Credits 3.00 PeopleSoft Course ID 002983

An introduction to the mathematical methods and statistical techniques that are employed by scientists in the disciplines of geochemistry, geophysics, hydrology and the petroleum/mineral industry. The course provides the quantitative skills necessary to manipulate geological data.

GEOL 491. Geological Literature and Research

Credits 2.00 PeopleSoft Course ID 007674 Grading Basis GRD

Provides advanced instruction in literature research to meet the B.A. Earth Science and B.S. Geology research requirements. Activities include the identification of a literature-based research problem, literature research techniques, critical reading and discussion, and the preparation of individual review papers on each student's research topic. **Prerequisite(s):** GEOL 291 or permission of the instructor.

GEOL 494. Internship in Geology

Credits 1.00 - 3.00 PeopleSoft Course ID 010549 Grading Basis GRD

Student conducts a research or applied project in geology outside of the university. Requires an approved proposal prior to registration and a final report at the culmination of the project. **Prerequisite(s):** Minimum of eight credit hours in geology, GEOL 291 and a geology GPA of 2.5 or higher.

GEOL 497. Problems in Geology

Credits 1.00 - 3.00 PeopleSoft Course ID 002003 Grading Basis GRD

An undergraduate research course in one of the fields of geology. Open to advanced students who have adequate preparation. **Prerequisite(s):** GEOL 291 or permission of the instructor.

GEOL 499A. Honors in Geology

Credits 1.00 PeopleSoft Course ID 000090 Grading Basis GRD

Prerequisite(s): GEOL 291 and 3.25 GPA or higher.

GEOL 499B. Honors in Geology

Credits 2.00 PeopleSoft Course ID 007561 Grading Basis GRD

Prerequisite(s): GEOL 291 and 3.25 GPA or higher.

GEOL 499C. Honors in Geology

Credits 3.00 PeopleSoft Course ID 005022 Grading Basis GRD

Prerequisite(s): GEOL 291 and 3.25 GPA or higher.

German

GER 101. Elementary German I

Credits 3.00 - 4.00 PeopleSoft Course ID 008023 Grading Basis GRD

The fundamentals of German through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. If student has had two or more years of the language in high school, he/she will not receive credit for the course.

GER 102. Elementary German II

Credits 3.00 - 4.00 PeopleSoft Course ID 006706 Grading Basis GRD

The fundamentals of German through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. If student has had two or more years of the language in high school, he/she will not receive credit for the course. **Prerequisite(s):** GER 101

GER 109. Accelerated Review of Elementary German

Credits 3.00 PeopleSoft Course ID 013274 Grading Basis GRD

Reviews elementary German grammar, reading, writing, speaking and listening skills in German. One hour of work a week in the language laboratory. For students who have had no more than two or three years of German in high school or qualify through the placement exam. **Prerequisite(s):** *Permission of the department head or per placement exam score.*

GER 111. Intensive German I

Credits 6.00 PeopleSoft Course ID 011412 Grading Basis GRD

The fundamentals of German through intensive listening, speaking, reading and writing. This four-week course is the equivalent of GER 101-102.

GER 212. Intensive German II

Credits 6.00 PeopleSoft Course ID 011413 Grading Basis GRD

The fundamentals of German through intensive listening, speaking, reading and writing at the intermediate level. This four-week course is the equivalent of GER 231-232. **Prerequisite(s):** GER 102, GER 109 or GER 111, or per placement exam score.

GER 231. Intermediate German I

Credits 3.00 PeopleSoft Course ID 001029 Grading Basis GRD

A thorough review of grammar and vocabulary building, conversation, composition and reading. **Prerequisite(s):** GER 102, GER 109, and GER 111, or per placement exam score

GER 232. Intermediate German II

Credits 3.00 PeopleSoft Course ID 005724 Grading Basis GRD

A thorough review of GER 231 grammar and vocabulary building. Conversation, composition and reading will be chosen to reach competency at the advanced intermediate level. **Prerequisite(s):** GER 231 or sufficient score on the foreign language placement test.

GER 300. Grammar and Communication

Credits 3.00 PeopleSoft Course ID 001204 Grading Basis GRD

Intensive training in grammatical structures and their application to oral and written communication. Instruction is in German. Fulfills the College of Arts and Letters writing-intensive requirements for the major. **Prerequisite(s):** GER 232 or per placement exam score.

GER 307. History of German Culture and Society

Credits 3.00 PeopleSoft Course ID 006683 Grading Basis GRD

A study of society, economics, politics and the arts in central Europe from Indo-European beginnings to the present. Emphasis is also placed on outstanding contributions of German-speaking people. Instruction is in German. **Prerequisite(s):** GER 300 or equivalent.

GER 308. Contemporary German Culture and Society

Credits 3.00 PeopleSoft Course ID 009777 Grading Basis GRD

A study of life, culture, politics and economics in modern Germany. **Prerequisite(s):** GER 300 or equivalent.

GER 320. Oral and Written Communication

Credits 3.00 PeopleSoft Course ID 005790 Grading Basis GRD

Intensive training in the use of modern, everyday German with emphasis on conversation and composition. Readings in German will provide a context for discussion and writing. **Prerequisite(s):** *Prerequisite: GER 300 or equivalent.*

GER 330. Business German

Credits 3.00 PeopleSoft Course ID 008857 Grading Basis GRD

A study of commercial and trade vocabulary and customs in conjunction with practice in commercial communication, including letter writing, interviews and interpretation. Instruction is in German. **Prerequisite(s):** GER 300 or equivalent.

GER 335. Introduction to German Literature

Credits 3.00 PeopleSoft Course ID 009341 Grading Basis GRD

A survey of German literature from 750 to the present. Textual analysis of sample writings of the most important literary movements. Instruction is in German. **Prerequisite(s):** GER 300 or equivalent.

GER 341. Translation Competencies

Credits 3.00 PeopleSoft Course ID 011250 Grading Basis GRD

In this course, students will develop linguistic competencies required in translation, including reading comprehension, summary writing, text analysis and use of mono- and bilingual dictionaries. Students will learn some basic electronic tools and word processing skills for translators and practice several types of translation, including direct translation, inverse translation and back translation. Fulfills the College of Arts and Letters writing-intensive requirement for the major. Instruction is in English and German.

Prerequisite(s): *Prerequisite: GER 300 or equivalent.*

GER 375. Business and Society in Germany

Credits 3.00 PeopleSoft Course ID 013422 Grading Basis GRD

Germany-"The Land of Ideas"- known for its engineering and technology, is a leader in innovation and research in every field. It is the strongest economic power in Europe. The course explores German society in its historical, political and economic contexts. Several aspects will be investigated: the EU, Globalization, immigration, environment, family policies, current affairs and the latest trends in the society. Instruction is in German. **Prerequisite(s):** GER 300.

GER 386. German Short Stories

Credits 3.00 PeopleSoft Course ID 013961 Grading Basis GRD

A study of literary German short prose from the 18th century to the present, including a selection of fables, fairy tales, modernist parables, aphorisms, narratives and short novellas. Authors studied may include Brecht, Kafka, Hoffmann, Ebner-Eschenbach, Schnitzler, Kleist, Bachmann, Borchert and Mann, among others. Instruction is in German. **Prerequisite(s):** GER 300.

GER 400. Advanced Conversation

Credits 3.00 PeopleSoft Course ID 007477 Grading Basis GRD

Discussions deal with topics of current interest. **Prerequisite(s):** GER 300 or permission of the instructor.

GER 405. The Age of German Classicism

Credits 3.00 PeopleSoft Course ID 009813 Grading Basis GRD

Reading and interpretation of significant works of Lessing, Goethe and Schiller. Instruction is in German. **Prerequisite(s):** GER 300 or permission of the instructor.

GER 415. German Romanticism and Realism

Credits 3.00 PeopleSoft Course ID 004604 Grading Basis GRD

A study of Romanticism and Realism with emphasis on Romantic poetry and the Realistic novel. Instruction is in German. **Prerequisite(s):** GER 300 or permission of the instructor.

GER 421. German Drama Workshop

Credits 3.00 PeopleSoft Course ID 014250 Grading Basis GRD

A study of German-language theater from the Enlightenment to the present, including a selection of texts by authors such as Gotthold Ephraim Lessing, Georg Büchner, Arthur Schnitzler, Bertholt Brecht and Elfriede Jelinek. Instruction is in German. **Prerequisite(s):** GER 300.

GER 425. Modern German Literature

Credits 3.00 PeopleSoft Course ID 007291 Grading Basis GRD

A study of the works of major German writers of the 20th century. Instruction is in German. **Prerequisite(s):** GER 300 or equivalent.

GER 436. Studies in German Literature

Cross listed with: ENG 436

Credits 3.00 PeopleSoft Course ID 011088 Grading Basis GRD

A study of selected works of German literature. Instruction is in English. May be repeated for credit when course content changes.

GER 446. Special Topics in German Literature**Credits 3.00 PeopleSoft Course ID 008286 Grading Basis GRD**

Study of a particular topic in German literature. It may cover all or specific German literature genre. Course may be repeated if content varies. **Prerequisite(s):** GER 300.

GER 447. Special Topics in German Culture**Credits 3.00 PeopleSoft Course ID 012663 Grading Basis GRD**

Students will study a particular topic in the civilization and/or culture of Germany. Course may be repeated if content varies. **Prerequisite(s):** GER 300.

GER 461. Contemporary German Literature**Credits 3.00 PeopleSoft Course ID 014345 Grading Basis GRD**

A study of contemporary German-language literature and media, focusing on cultural production since the 1990s. This course explores topics such as cultural memory, identity, German reunification, globalization, multiculturalism, climate change, digitalization and social justice. Instruction is in German.

Prerequisite(s): GER 300.

GER 465. German Cinema**Credits 3.00 PeopleSoft Course ID 011789 Grading Basis GRD**

An analysis of the German cinema from the 1920s through the present. Emphasis will be on the relations between the German film and certain seminal periods in German history. **Prerequisite(s):** GER 300 or permission of the instructor

GER 490. Special Studies in German**Credits 1.00 - 4.00 PeopleSoft Course ID 006987 Grading Basis GRD**

Allows students an opportunity to complete independent studies under faculty supervision. **Prerequisite(s):** Permission of the department head.

GER 499C. Seniors Honors Project**Credits 2.00 PeopleSoft Course ID 011366 Grading Basis OPT**

Gerontology

GERN 280. Social Gerontology

Cross listed with: SOCI 280

Credits 3.00 PeopleSoft Course ID 002621 Grading Basis GRD

An interdisciplinary introduction to the study of aging. The course provides an overview of issues surrounding aging in contemporary society: personal, familial, communal and societal. **Corequisite(s):** 20 hours of community service-learning.

GERN 305. Programs and Services for the Elderly**Credits 3.00 PeopleSoft Course ID 000334 Grading Basis GRD**

A review of the programs and services provided for the elderly in the public and private sectors of America. Observations and participation in local programs for the elderly will be required. **Prerequisite(s):** GERN 280/SOCI 280

GERN 327. Substance Use Interventions

Cross listed with: FAM 327/SOWK 327

Credits 3.00 PeopleSoft Course ID 014227 Grading Basis GRD

Explore types, effects and prevalence of substance use in the U.S. Impacts of use on individuals, families, communities and society is considered through

biopsychosocial, economic and legal/political lenses. Dual foci include developmental risks and outcomes for individuals and families throughout the life course, and social policy debate and legislation. Includes a survey of intervention approaches and treatment modalities across the span of self-help, medical treatment, programs in behavioral health and court-mandated models.

GERN 375. Grant Writing for Agencies

Cross listed with: FAM 375, NPS 375, SOWK 375

Credits 3.00 PeopleSoft Course ID 011229 Grading Basis GRD

Emphasizing active learning, this course teaches the basics of grant and proposal writing. Efficient research, persuasive prose and the importance of relationships are stressed. Private and corporate philanthropy and government grants are examined.

GERN 400. Skills and Techniques in Gerontological Assessment**Credits 3.00 PeopleSoft Course ID 002647 Grading Basis GRD**

The study of the skills and techniques used in assessing the elderly client. Assessment is made from the holistic approach: physical, psychological and social. **Prerequisite(s):** GERN 280/SOCI 280

GERN 450. Palliative and Hospice Care: An Interdisciplinary Approach

Cross listed with: SOWK 450

Credits 3.00 PeopleSoft Course ID 013887 Grading Basis GRD

An interdisciplinary approach to assessment and care planning of older adults experiencing need for palliative and/or hospice support. Familial, cultural, legislative and social implications of programs and service delivery.

GERN 487. Special Topics in Gerontology**Credits 3.00 PeopleSoft Course ID 003007 Grading Basis GRD**

Examination of selected topics in gerontology that are of current importance in the field of gerontology. Course may be repeated for credit.

GERN 490. Special Studies in Gerontology**Credits 1.00 - 3.00 PeopleSoft Course ID 006996 Grading Basis GRD**

Independent study in gerontology under faculty supervision. Limited to gerontology minors. Can be repeated for credit. **Prerequisite(s):** GERN 280/SOCI 280, GERN 305, and GERN 400.

GERN 495. Field Experience/Seminar in Gerontology (1, 6)**Credits 3.00 PeopleSoft Course ID 005382 Grading Basis GRD**

Supervised field experience in gerontology settings that allows observation and experience with the well and frail elderly. A minimum of six hours in the assigned setting each week and one hour seminar on campus. **Prerequisite(s):** GERN 280/SOCI 280, GERN 305 and GERN 400, major elective, and approval of the gerontology minor adviser.

Graphic Design

GRPH 101. Digital Media Design I (0, 9)**Credits 3.00 PeopleSoft Course ID 004168 Grading Basis GRD**

An introduction to graphic design using industry standard software. Students will explore fundamental concepts, terminology and media that relate to the creation and presentation of graphic design projects. **Prerequisite(s):** ART 102 and ART 104 or permission of the instructor.

GRPH 200. Image Making (0, 6)**Credits 3.00 PeopleSoft Course ID 003817 Grading Basis GRD**

An exploration of strategies for conceptualizing, analyzing and solving design problems through image making. Emphasis is placed on graphic presentation of ideas and the creative process through a variety of mediums and materials. **Prerequisite(s):** ART 102.

GRPH 201. Digital Media Design II**Credits 3.00 PeopleSoft Course ID 013985 Grading Basis GRD**

A hands-on approach to digital media and production using leading edge software for web and interactive design. Concepts and content include visual language for screens and devices, exploration of time-based media, audio/video integration, user feedback tools and digital portfolios.

Prerequisite(s): GRPH 101.

GRPH 206. Typography I (0, 9)

Credits 3.00 PeopleSoft Course ID 003568 Grading Basis GRD

An introduction to the study of letter forms for their aesthetic and communicative value. Typographic fundamentals of alphabet history, type classification, printing technology effects, font design, visual space, hierarchy and grid systems will be explored. **Prerequisite(s):** GRPH 101.

GRPH 208. Portfolio Review

Credits 0.00 PeopleSoft Course ID 011005 Grading Basis CNC (Repeatable once for pass/fail standing)

Portfolio review required to enroll in graphic design courses at upper division standing. May be repeated once for pass/fail standing. **Prerequisite(s):** GRPH 101, GRPH 200 and GRPH 206. **Corequisite(s):** GRPH 206.

GRPH 292. Topics in Graphic Design

Credits 1.00 - 3.00 PeopleSoft Course ID 013284 Grading Basis GRD (Repeatable)

This course is a study of selected topics in graphic design at the introductory level. May be repeated when course content changes. See MyMadison for current topics.

GRPH 300. Illustration (0, 9)

Cross listed with: ART 300

Credits 3.00 PeopleSoft Course ID 004886 Grading Basis GRD

Through demonstrations, theory and practical application, students are introduced to numerous media and illustrative techniques. Encouraged experimentation is tempered by an understanding of problem solving and conceptualization. **Prerequisite(s):** GRPH 208.

GRPH 301. Digital Media Design III

Credits 3.00 PeopleSoft Course ID 013986 Grading Basis GRD

Through demonstrations and practical application, students are introduced to digital techniques used in design applications. Experimentation is encouraged through problem solving and conceptualization, filtered through the lens of contemporary digital production. Students will be challenged with executing effective design solutions through creative thinking and image creation as it applies to graphic design. **Prerequisite(s):** GRPH 208.

GRPH 304. Package Design (0, 9)

Credits 3.00 PeopleSoft Course ID 002642 Grading Basis GRD

Through theory, demonstrations and practical application, students learn to design in three-dimensions. Focus will be placed on aesthetics, as well as the form and function of a product's housing. **Prerequisite(s):** GRPH 208.

GRPH 306. Typography II (0, 9)

Credits 3.00 PeopleSoft Course ID 001282 Grading Basis GRD

An intermediate study of typography for its aesthetic and communicative value. Context effects on legibility and readability, type as image, type in sequence and typographic systems will be explored. **Prerequisite(s):** GRPH 208.

GRPH 310. Graphic Illustration

Cross listed with: ART 310

Credits 3.00 PeopleSoft Course ID 014626 Grading Basis GRD

Students will use traditional fine arts and digital media to explore the conceptualization, production and communication of visual information integral to selling products, clarifying and organizing data, explaining abstract concepts, and educating through the creation of imagery for advertising, infographics,

and technical and scientific illustrations. Emphasis is placed on development of technical skillsets, personal aesthetic and style. **Prerequisite(s):** ART 102, ART 104 and ART 108.

GRPH 312. Web Design

Credits 3.00 PeopleSoft Course ID 002623 Grading Basis GRD

Intermediate level web design and front-end development through theory and practical application. Assignments will focus on the unique form, content and structures associated with designing for a device-agnostic web. Creative iteration and digital design are emphasized in tandem with changing technology. **Prerequisite(s):** GRPH 201 and GRPH 208.

GRPH 313. Interactive Media

Credits 3.00 PeopleSoft Course ID 013463 Grading Basis GRD

Intermediate level visual interface design, motion graphics, and interaction design through theory, demonstration and practical application. Assignments will focus on digital craft, creativity, and presentation. Emphasis on digital and interactive media, and functionality, usability, and user experience.

Prerequisite(s): GRPH 201 and GRPH 208.

GRPH 340. Poster Design (0, 9)

Credits 3.00 PeopleSoft Course ID 011945 Grading Basis GRD

Through theory and practical application, students learn to design for the poster realm. Focus will be placed on aesthetics, as well as form and function. Encouraged experimentation is tempered by an understanding of problem solving and conceptualization. **Prerequisite(s):** GRPH 208.

GRPH 375. Letterpress

Cross listed with: ART 375

Credits 3.00 PeopleSoft Course ID 013509 Grading Basis GRD

This studio course offers students an opportunity to engage in the process and product of letterpress printing through various techniques and conceptual approaches. Instruction focuses on text and image relationships by integrating metal and wood type, and other type-high surfaces. Emphasis will be placed on the acquisition of skills and vocabulary and the creative use of type and image. The course will address the history of letterpress and its contribution to contemporary art and design. **Prerequisite(s):** ART 102 and ART 104; for GRPH credit: GRPH 208.

GRPH 376. Intermediate Book Arts: Concept, Content, Form

Cross listed with: ART 376

Credits 3.00 PeopleSoft Course ID 013510 Grading Basis GRD

This course challenges the student to develop a limited edition hand-made artists' book. The appropriate format for each individual's concepts are identified, adapted, customized, applied, and produced. Content development, book design, integration of various media and the functionality of various bookmaking materials are explored. We will consider the artists' book as a sculptural form and locate it within the broader context of contemporary writing and visual art. **Prerequisite(s):** ART 276. For GRPH: ART 276 and GRPH 208.

GRPH 380. Wayfinding, Signage, Exhibit Design

Credits 3.00 PeopleSoft Course ID 014225 Grading Basis GRD

This course examines graphic design as applied to the built environment. Environmental graphic design applications include but are not limited to wayfinding and directional signage, exhibition graphics, large-format graphics and pop up displays (e.g. storefronts, showrooms, etc.), user interface design, branding, and retail design. **Prerequisite(s):** GRPH 208.

GRPH 390. Independent Study in Graphic Design

Credits 1.00 - 3.00 PeopleSoft Course ID 000234 Grading Basis GRD

Independent activity at the intermediate level, such as research or studio practice, under faculty supervision. Projected studies in Graphic Design must

be arranged with the instructors who will direct them. Offered only with the consent of the instructor. **Prerequisite(s):** GRPH 208.

GRPH 392. Topics in Graphic Design

Credits 3.00 PeopleSoft Course ID 011425 Grading Basis GRD (Repeatable)

Study of selected topics in graphic design at the intermediate level. May be repeated when course content changes. See MyMadison for current topics.

Prerequisite(s): GRPH 208.

GRPH 400. Topics in Illustration

Cross listed with: ART 400

Credits 3.00 PeopleSoft Course ID 014627 Grading Basis GRD

This course allows for the development of an advanced level class that teaches content not introduced in required illustration courses or expanding on the existing illustration courses. Instructional goals and defined outcomes will be unique to the class topic. **Prerequisite(s):** For ART: ART 300 or ART 310; For GRPH: GRPH 208 and either GRPH 300 or GRPH 310; or permission of instructor.

GRPH 406. Advanced Typography (0, 9)

Credits 3.00 PeopleSoft Course ID 000403 Grading Basis GRD

An advanced study of typography for its aesthetic and communicative value. Topics of research, narrative, information design, format organization and production techniques will be explored. Solutions reflect advanced text and image integration knowledge through complex and variable structure development. **Prerequisite(s):** GRPH 306.

GRPH 408. Brand Identity

Credits 3.00 PeopleSoft Course ID 007983 Grading Basis GRD

Exploration of visual identities utilizing a holistic, systems approach to design. Introduces business strategies and design techniques associated with brand development. Emphasis is placed on methods of thinking, research and implementation. **Prerequisite(s):** GRPH 306.

GRPH 410. Graphic Design Portfolio

Credits 3.00 PeopleSoft Course ID 007915 Grading Basis GRD

An examination of the business of graphic design, employment strategies and freelance opportunities. Focus is placed on solidification of the portfolio for employment and/or graduate school. This course is strongly recommended for the last semester prior to graduation. **Prerequisite(s):** GRPH 406 and GRPH 408. **Corequisite(s):** GRPH 408.

GRPH 490. Independent Studies in Graphic Design

Credits 1.00 - 3.00 PeopleSoft Course ID 000964 Grading Basis GRD

Independent activity, such as research or studio practice, under faculty supervision. Projected studies in any area of the school's offering must be arranged with the instructors who will direct them. Offered only with consent of the director. **Prerequisite(s):** GRPH 208.

GRPH 491. Studio Assistant

Cross listed with: ARCD 491, ARED 491, ART 491, INDU 491

Credits 1.00 - 3.00 PeopleSoft Course ID 012198 Grading Basis GRD (Repeatable)

An on-campus program monitored on an individual basis designed to provide practical studio experience in the visual arts. Students will learn safe studio practices and management skills, including material use, inventory control, and the proper operation of equipment found within various individual classroom studios. **Prerequisite(s):** Permission of the instructor.

GRPH 492. Topics in Graphic Design

Credits 3.00 PeopleSoft Course ID 011421 Grading Basis GRD (Repeatable)

Study of selected topics in graphic design at the advanced level. May be repeated when course content changes. See MyMadison for current topics.

Prerequisite(s): GRPH 306.

GRPH 496. Internship in Graphic Design

Credits 1.00 - 6.00 PeopleSoft Course ID 006040 Grading Basis GRD

An off-campus program prepared and monitored on an individual basis. Internships provide practical experience in professional graphic design settings. **Prerequisite(s):** Permission of the instructor and GRPH 208; students can only enroll for a maximum of three credits per internship.

GRPH 497. Graphic Design Senior Capstone

Credits 6.00 PeopleSoft Course ID 013996 Grading Basis GRD

Advanced level exploration of graphic design principles, methods, applications and professional practice. Independent research projects are emphasized. Students will produce and refine a professional graphic design portfolio suitable for employment and/or application to graduate school. This course is strongly recommended for the last semester prior to graduation.

Prerequisite(s): GRPH 312 and GRPH 408; or permission of instructor.

GRPH 499. Honors (1, 3, 2)

Credits 6.00 PeopleSoft Course ID 002750 Grading Basis GRD

Prerequisite(s): GRPH 208.

Greek

GRK 101. Elementary Greek I

Credits 3.00 - 4.00 PeopleSoft Course ID 006414 Grading Basis GRD

Designed to provide a reading knowledge of Classical Greek as well as New Testament koine. Greek life, thought and culture are also discussed. Especially recommended for history, English, and philosophy and religion majors.

GRK 102. Elementary Greek II

Credits 3.00 - 4.00 PeopleSoft Course ID 001269 Grading Basis GRD

Designed to provide a reading knowledge of Classical Greek as well as New Testament koine. Greek life, thought and culture are stressed. Especially recommended for science, English and philosophy majors. **Prerequisite(s):** GRK 101 or equivalent.

GRK 231. Intermediate Greek I

Credits 3.00 PeopleSoft Course ID 006387 Grading Basis GRD

An intensive reading course. Selections from Classical Greek writers and/or the New Testament. **Prerequisite(s):** One year of college Greek or equivalent.

GRK 232. Intermediate Greek II

Credits 3.00 PeopleSoft Course ID 010110 Grading Basis GRD

An intensive reading course. Selections from Classical Greek writers and/or the New Testament. **Prerequisite(s):** GRK 231 or permission of the instructor.

Health and Human Services

HHS 440. International Health and Human Services in Malta

Credits 4.00 PeopleSoft Course ID 011965 Grading Basis GRD

This May session, study abroad course examines health issues in Malta and provides a team oriented, project experience. Project participation, tours, and arranged meetings with local experts are used to illustrate health related problems that apply globally and are compared and contrasted with those in the United States.

Health Sciences

HTH 100. Personal Wellness [C5W]

Credits 3.00 PeopleSoft Course ID 003133 Grading Basis GRD

Emphasizes lifestyle behaviors contributing to health promotion and disease prevention. General areas affecting health status are identified. Suggestions are

made as to how health-related behaviors, self-care and individual decisions contribute to health and influence dimensions of wellness. May be used for general education credit.

HTH 150. Introduction to Health Sciences

Credits 2.00 PeopleSoft Course ID 013554 Grading Basis GRD

This course orients students in the major to foundational expectations and requirements for successful completion of the Health Science major and Health Studies concentration. The course introduces conceptual ideas such as a wide array of health careers, importance of gaining early and regular field experiences, and writing and research basics.

HTH 210. Medical Terminology

Credits 3.00 PeopleSoft Course ID 003884 Grading Basis GRD

Study of terms that relate to body systems, anatomical structures, medical processes and procedures, and a variety of diseases/disorders that afflict human organisms.

HTH 231. Population Health Determinants

Credits 3.00 PeopleSoft Course ID 013555 Grading Basis GRD

Many factors combine together to affect the health of individuals and communities. In an effort to advance public health, health professionals must be cognizant not only of behaviors which may compromise or promote health, but also the interaction of social and physical factors which impact health outcomes. **Prerequisite(s):** HTH 150. **Corequisite(s):** HTH 150.

HTH 245. Foundations of Infectious Disease

Credits 3.00 PeopleSoft Course ID 000418 Grading Basis GRD

An overview of the incidence, prevalence, causation, and prevention of the major infectious diseases which are currently of concern in the twenty-first century. Major signs and symptoms of the diseases as well as treatment will be reviewed. The course will also cover the body's defense system and the principles of disease occurrence. **Prerequisite(s):** HTH 150. **Corequisite(s):** HTH 150.

HTH 255. Chronic Disease and Disabilities

Credits 3.00 PeopleSoft Course ID 013469 Grading Basis GRD

An overview of the incidence, prevalence, causation and prevention of chronic diseases and disabilities across the lifespan. Major signs and symptoms of the diseases and disabilities as well as treatment will be reviewed. **Prerequisite(s):** HTH 100 and HTH 150.

HTH 314. Rural Health: An Interdisciplinary Approach

Cross listed with: IPE 314, NSG 314, SOWK 314

Credits 3.00 PeopleSoft Course ID 013642 Grading Basis GRD

Students study, observe and participate in interdisciplinary assessment, planning and delivery of community-based primary health care in partnership with residents and agencies of a host rural county. Learning activities will emphasize rural culture, rural health care and interdisciplinary practice.

HTH 315. Peer Leadership in Health Sciences

Credits 2.00 PeopleSoft Course ID 013868

Undergraduate students are provided a leadership opportunity to serve as a peer leader for a selected class. Teaching and learning occur under faculty mentorship. The student and faculty member collaborate to ensure proper levels of rigor and support, identify specific goals, discuss reflections of experiences, and make connections to future professions. Serving as a peer leader allows students to see college teaching from a new perspective. Course may be repeated for a maximum of 4 credits. **Prerequisite(s):** Application and/or interview with supervising faculty member must be complete; student must have previously completed the course earning a B or higher; Junior or Senior status; permission of instructor.

HTH 320. Statistical Methods for Health Science Research

Credits 3.00 PeopleSoft Course ID 002768 Grading Basis GRD

This course reviews statistical concepts and techniques with special reference to health science applications and issues. It also reinforces the logic of statistical decision making for health and medical research concerns.

Prerequisite(s): MATH 220 or COB 191.

HTH 351. Health Behavior Change

Credits 3.00 PeopleSoft Course ID 001407 Grading Basis GRD

This course will identify individual and group characteristics that influence health behaviors and the features of programs designed to change behavior that makes them more or less effective. Students will develop the skills necessary to formulate health-modification programs. **Prerequisite(s):** HTH 231.

HTH 352. Environmental Health

Credits 3.00 PeopleSoft Course ID 003439 Grading Basis GRD

An investigation of environmental factors and their effects on the health of the individual, community and society.

HTH 354. U.S. and Global Health Care Systems

Credits 3.00 PeopleSoft Course ID 010302 Grading Basis GRD

The course provides an overview of the U.S. health care system by examining the organization, financing, and delivery of health services. The class will include current issues in health care policy, the future of health care systems in America, and a comparative global analysis of health care systems.

HTH 355. HIV/AIDS: A Global Perspective

Credits 1.00 PeopleSoft Course ID 004318 Grading Basis GRD

Discussion includes theories of origins, statistics and characteristics of the causative pathogen, incubation, illness patterns, transmission, prevention and treatment of HIV/AIDS and other STDs. HIV/AIDS and other STDs in relation to prisons, children, schools, global concerns, health care systems and legal factors will be considered.

HTH 368. Global Health

Credits 3.00 PeopleSoft Course ID 004614 Grading Basis GRD

This course provides students with an opportunity to critically examine and explore a wide range of social, economic and demographic themes in global health. Focus is given to the evolution of major causes of disease, the ecology and etiology of major infections and chronic diseases, and the social and economic consequences of changes in mortality and health. Programs designed to affect health conditions are examined.

HTH 370. Child and Adolescent Health

Credits 3.00 PeopleSoft Course ID 009328 Grading Basis GRD

This course will discuss the CDC priority health risk categories and the Healthy People Objectives for the Nation as they relate to child and adolescent health. In addition, the CDC model for Coordinated School Health Programs will be explored to determine specific strategies for health improvement.

HTH 372. Human Sexuality

Credits 3.00 PeopleSoft Course ID 010123 Grading Basis GRD

An in-depth study of sexuality across the lifespan. Emphasis is placed on the development of sexuality with attention given to the psychological, physiological, ethical and socio-cultural implications. **Prerequisite(s):** HTH 231.

HTH 378. The Use and Effects of Drugs

Credits 3.00 PeopleSoft Course ID 008523 Grading Basis GRD

A study of the use and pharmacological properties of popular legal and illegal drugs and their effects on the health of individuals and society.

HTH 380. Health Communication

Credits 3.00 PeopleSoft Course ID 013948 Grading Basis GRD

The course will introduce health communication theory, research and practice. Students will learn how to design, communicate and evaluate effective health promotion messages. **Prerequisite(s):** HTH 351. **Corequisite(s):** HTH 351.

HTH 389. Practicum in Health Sciences

Credits 1.00 - 3.00 **PeopleSoft Course ID** 010372 **Grading Basis** GRD

Selected practicum experiences which provide students with supervised practicum experiences.

HTH 390. Special Studies in Health Science

Credits 1.00 - 2.00 **PeopleSoft Course ID** 001832 **Grading Basis** GRD

An independent study for students to pursue individual projects or research related to a selected topic of current importance to the Health Science field. Students will be under the supervision of a faculty member. Course may be repeated if the topic varies for a maximum of 4 credits. **Prerequisite(s):** *Permission of the instructor.*

HTH 391. Special Topics in Health Sciences

Credits 3.00 **PeopleSoft Course ID** 014085 **Grading Basis** GRD

The courses offered under this title are designed to allow exploration of current topics in health science not covered elsewhere in the curriculum. Course content will vary by term and instructor. Course may be repeated for credit when course content changes.

HTH 408. Health Research Methods

Credits 3.00 **PeopleSoft Course ID** 008546 **Grading Basis** GRD

This course will present an overview of research methods within public health, emphasizing the steps involved in the research process. Methodological issues covered will include the ethics of health studies research, qualitative and quantitative research designs, operationalization of concepts, measurement of variables, and techniques of sampling, data collection and analysis.

Prerequisite(s): HTH 320 and HTH 351.

HTH 417. Women's Global Health and Human Rights

Cross listed with: NSG 417, WGSS 417

Credits 3.00 **PeopleSoft Course ID** 013705 **Grading Basis** GRD

An international and human rights approach providing an overview of health issues within the context of a woman's life cycle. Attention will be given to critical issues of women's health such as access to health care and gender-based violence. Such issues as sexuality, nutrition, diseases affecting women, violence, harmful traditional practices, and sex trafficking will be discussed.

HTH 420. Global Perspectives on Alcohol and Drug Policies

Credits 3.00 **PeopleSoft Course ID** 013556 **Grading Basis** GRD

This course will study drug policy from a public health perspective. Students will examine global alcohol and other drug policies assessing their impact at the regional, state, national and international levels. Emphasis will be given to the contemporary phases of alcohol and other drug policies and the war on drugs.

HTH 422. Public Health and Healthcare Policy

Credits 3.00 **PeopleSoft Course ID** 013949 **Grading Basis** GRD

This course will provide a framework for understanding and analyzing a range of health policy issues such as accessibility, cost and quality of healthcare; disaster preparedness; the safety of our food, water, environment and medications; and the right to make individual decisions about our personal health. The course will explore the U.S. policy-making system, civic engagement, the essential issues in health policy and how health policies impact the work of health professionals. **Prerequisite(s):** HTH 231 and HTH 354.

HTH 423. Ethics and Critical Thinking in Health

Credits 3.00 **PeopleSoft Course ID** 012928 **Grading Basis** GRD

This course explores ethical issues facing the public health and healthcare systems in the United States. Key ethical frameworks are used to analyze contemporary public health and healthcare issues and the overlap and distinctions between them. The course will review fundamental and emerging topics (individual rights vs. the common good, genetics, health promotion and disease prevention) and challenge students to think critically about them. Student will play an active role in presenting and evaluating ethical concepts and conflicts to facilitate class discussion. **Prerequisite(s):** HTH 351 and HTH 354. **Corequisite(s):** HTH 354.

HTH 441. Biomechanics for the Healthcare Professional

Cross listed with: KIN 407

Credits 3.00 **PeopleSoft Course ID** 000769 **Grading Basis** GRD

This course is designed to introduce the student to a variety of biomechanical concepts and applications as related to the health professions. Specific attention will be given to the biomechanical aspects of the musculoskeletal system. **Prerequisite(s):** BIO 290/BIO 290L.

HTH 450. Epidemiology

Credits 3.00 **PeopleSoft Course ID** 006634 **Grading Basis** GRD

A study of the causation and prevention of the major diseases that affect the quality of an individual's life. Practical skills utilized by practicing epidemiologists are emphasized. **Prerequisite(s):** HTH 320 and HTH 351; or senior health services administration major.

HTH 456. Grant Writing in Health Sciences

Credits 3.00 **PeopleSoft Course ID** 014089 **Grading Basis** GRD

Increasingly, social service and health providers are required to have grant writing skills and/or be responsible for obtaining external funds to support their positions, fund projects or promote programs. This course will provide the overview of grantsmanship skills. These skills include locating funding sources, improving collaboration skills, understanding program development and preparing grant proposals. **Prerequisite(s):** HTH 351 or permission of the instructor. **Corequisite(s):** HTH 351.

HTH 458. Health Program Planning and Evaluation

Credits 3.00 **PeopleSoft Course ID** 003780 **Grading Basis** GRD

This lecture and laboratory course introduces students to principles and techniques employed to plan, implement and evaluate health promotion programs. Students will conduct a campus or community event and compile a formal report. **Prerequisite(s):** HTH 351; or health services administration major and HSA 358; or senior substance use disorder education minor.

HTH 471. Health Aspects of Gerontology

Credits 3.00 **PeopleSoft Course ID** 008502 **Grading Basis** GRD

Promotion of health in the aged; physiological aspects of the aging process; community, state and federal health programs, and services for the aged.

HTH 490. Advanced Special Studies in Health Science

Credits 3.00 **PeopleSoft Course ID** 002492 **Grading Basis** GRD

An advanced opportunity to conduct research where the student will apply their knowledge of Health Science to a specific research project or area. Students will be under the supervision of a faculty member. Course may be repeated if the topic varies for a maximum of six credits. **Prerequisite(s):** Senior status only; permission of the department head.

HTH 495. Internships in Health Organizations

Credits 3.00 **PeopleSoft Course ID** 013228 **Grading Basis** GRD

Full-time directed field experience in a health organization. Opportunity provided to work in an appropriate setting. Student furnishes off-campus living and traveling expenses. **Prerequisite(s):** Prerequisites: Permission of the instructor and a 2.5 grade point average.

HTH 499A. Honors

Credits 1.00 PeopleSoft Course ID 007772 Grading Basis GRD

The purpose of the first semester honors capstone project is to develop a project outline, select an adviser and two readers, and submit the proposal with the completed signature page to the Honors College by the deadline.

Corequisite(s): HTH 320 and HTH 408.

HTH 499B. Honors

Credits 1.00-3.00 PeopleSoft Course ID 002122 Grading Basis GRD

The purpose of the second semester honors capstone project is to complete an introduction to the research topic; complete a thorough literature review and a methodology section of a research paper; complete IRB training; complete an IRB application; and begin data collection. **Prerequisite(s):** HTH 499A.

Corequisite(s): HTH 499A.

HTH 499C. Honors

Credits 2.00 PeopleSoft Course ID 004562 Grading Basis GRD

The third semester of the honors capstone project is designed for students to complete their projects. They should conduct data analyses if appropriate, and write summary, conclusions and recommendations (the equivalent of Chapters 5 and 6). In addition, students will prepare a research poster for the honors symposium. **Prerequisite(s):** HTH 499B. **Corequisite(s):** HTH 499B.

Health Services Administration

HSA 290. Gerontology for Health Services Administration

Credits 3.00 PeopleSoft Course ID 012975 Grading Basis GRD

This course provides an introduction to the study of aging from a multidisciplinary perspective including the biological, psychological and sociological aspects of aging. Emphasis will be placed on theoretical and practical application of course content to careers in health services administration. **Prerequisite(s):** Fully admitted HSA majors only.

HSA 358. Health Services Administration Cornerstone

Credits 3.00 PeopleSoft Course ID 002096 Grading Basis GRD

This course provides an introduction to management functions, tasks and roles as they are carried out in health services organizations. Discussion of emerging issues affecting the management of health services organizations is provided. This course uses the case method of analysis to develop critical thinking skills.

Prerequisite(s): Fully admitted HSA major and HTH 354.

HSA 360. Health Care Marketing

Credits 3.00 PeopleSoft Course ID 012306 Grading Basis GRD

This course introduces the role, functions and tasks of health care marketing. Attention is devoted to understanding basic marketing principles; using oral, written and visual electronic communications media; and developing marketing plans for health care organizations. **Prerequisite(s):** Fully admitted HSA majors only.

HSA 363. Health Economics

Credits 3.00 PeopleSoft Course ID 010362 Grading Basis GRD

This course explains how economic forces affect the health service sector and how economic tools can be used to assess and improve health industry performance. Students examine issues related to efficiency, effectiveness, value and behavior in the production and consumption of health and healthcare. **Prerequisite(s):** Fully admitted HSA major, ECON 201 and HTH 320.

HSA 365. Healthcare Ethics and the Law

Credits 3.00 PeopleSoft Course ID 000709 Grading Basis GRD

This course provides an overview of health ethics and health law for students majoring in health services administration. Students will address the major principles facing a health service professional in the delivery of health services.

Particular attention will be paid to development of methodologies for ethical decision-making. **Prerequisite(s):** Fully admitted HSA major and HTH 354 or permission of the instructor.

HSA 366. Health Politics and Policy

Credits 3.00 PeopleSoft Course ID 012488 Grading Basis GRD

This course introduces students to health policy at the local, state and national levels. Students will explore the policy-making process from agenda-setting through implementation. External determinants and stakeholders will be identified to examine their influence on policy. Emphasis will be given to how health policy impacts health service organizations and the delivery of healthcare.

Prerequisite(s): Fully admitted HSA major and HTH 354.

HSA 367. Comparative International Health Systems

Credits 3.00 PeopleSoft Course ID 007270 Grading Basis GRD

This course concentrates on various approaches used to provide public and personal health services around the world. Strengths and weaknesses of different health care systems in terms of availability, accessibility, acceptability, cost effectiveness, continuity and quality of services will be considered.

Prerequisite(s): Fully admitted HSA major and HTH 354 or permission of the instructor.

HSA 385. Professional Development Seminar

Credits 1.00 PeopleSoft Course ID 007666 Grading Basis GRD

This course is a career development seminar for health services administration students. An array of health administrators from varied health care organizations helps expand students' understanding of the health administration field. This course is designed for junior-level students with an expectation of a major concentration in health services administration.

Prerequisite(s): Fully admitted HSA majors only.

HSA 390. Special Topics in Health Services Administration

Credits 1.00-3.00 PeopleSoft Course ID 014275 Grading Basis GRD

A course for students to examine a selected topic or critical issue of current importance to the field of health services administration. Topics will vary. Courses offered under this title are designed to allow for exploration of current topics in health services administration not covered elsewhere in the curriculum. Students will work under the supervision of a faculty member. Course may be repeated for a maximum of six credits if the topic varies.

HSA 452. Hospital Organization and Administration

Credits 3.00 PeopleSoft Course ID 002932 Grading Basis GRD

This course examines the organization and operation of community hospitals in the U.S. Specific attention is devoted to management's role in internal operations and in external relationships with the community and other stakeholders. Discussion of emerging issues affecting the management of hospitals and hospital systems is provided. **Prerequisite(s):** Fully admitted HSA major, HTH 354 and HSA 358 or permission of the instructor.

HSA 454. Internship in Health Organizations

Credits 3.00 PeopleSoft Course ID 011356 Grading Basis GRD

Full-time directed field experience in a health organization (320 hours). Opportunity provided to work in an appropriate setting. Student furnishes off-campus living and traveling expenses. **Prerequisite(s):** Fully admitted HSA major, HSA 385, HSA 464 and two of the following: HSA 452, HSA 455, HSA 456 or permission of the instructor. **Corequisite(s):** Fully admitted HSA major, HSA 385, HSA 464 and two of the following: HSA 452, HSA 455, HSA 456 or permission of the instructor.

HSA 455. Long Term Care Organization and Administration

Credits 3.00 PeopleSoft Course ID 002281 Grading Basis GRD

This senior-level course teaches health services administration students about the health care operations across the continuum of long-term care. Course emphasis will be placed on the delivery, financing, regulation and management of post-acute and long-term care services in the community and institutional settings. Other relevant topics will include the long-term care workforce, quality improvement and current trends in long-term care policy. This course will consist of subject lectures, guest speakers, site visits and case studies.

Prerequisite(s): *Fully admitted HSA major and HSA 358.*

HSA 456. Principles of Ambulatory Care Operations**Credits 3.00 PeopleSoft Course ID 005247 Grading Basis GRD**

This course provides an in-depth investigation of the operational requirements in ambulatory care including medical group practices, community and hospital-based clinics; urgent care centers; and ambulatory surgery facilities. Areas of focus will include staffing, budgeting, facility management, facility design, information technology, regulatory requirements and innovation.

Prerequisite(s): *Fully admitted HSA major, HTH 354 and HSA 358.*

HSA 462. Managed Care**Credits 3.00 PeopleSoft Course ID 006993 Grading Basis GRD**

The growing influence of managed health care on the organization and delivery of health services in the United States is addressed in this course. Structural and operational characteristics of managed care organizations and plans, including HMOs, PPOs and other plans are explored, as are the implications of managed care plans for the management of hospitals and other health care organizations. **Prerequisite(s):** *Fully admitted HSA major and HSA 358 or permission of the instructor.*

HSA 463. Healthcare Quality Management and Analytics**Credits 3.00 PeopleSoft Course ID 011017 Grading Basis GRD**

The purpose of this course is to investigate the evolution of healthcare quality improvements and current initiatives in the industry, and to develop the knowledge and skills necessary to plan and conduct healthcare quality improvement activities across various healthcare organizations. Emphasis will be made on current industry quality procedures and anticipated governmental regulatory initiatives that impact health care organizations' operations and reimbursement based on quality outcomes. Students will explore the value of healthcare analytics and its role in tracking, identifying, analyzing and shaping proactive, safe, effective, quality strategic initiatives. **Prerequisite(s):** *Fully admitted HSA major, HTH 354 and HSA 358 or permission of the instructor.*

HSA 464. Healthcare Finance**Credits 3.00 PeopleSoft Course ID 000599 Grading Basis GRD**

This course provides a general understanding of the fundamental concepts and tools of healthcare organizational financial management, as applied to healthcare organizations. The course examines payment sources and reimbursement arrangements; the public and private financing of healthcare service organizations from both a theoretical and practical perspective; and discusses emerging trends in the healthcare industry that affect financial decision-making. **Prerequisite(s):** *Fully admitted HSA major, FIN 345, HTH 320 and HSA 358.*

HSA 480. Health Services Administration Capstone**Credits 3.00 PeopleSoft Course ID 014363 Grading Basis GRD**

This capstone course integrates the student's knowledge and skills obtained throughout the health services administration curriculum. Students examine a variety of topics culminating in the identification, critique and development of salient recommendations on current trends and issues affecting our health care

system. The course utilizes a multidisciplinary, multi-system approach examining solutions from organizational behavior, human resources, strategic planning, business and organizational leadership. **Prerequisite(s):** *HSA 452, HSA 455 and HSA 456.* **Corequisite(s):** *HSA 452, HSA 455 and HSA 456.*

HSA 490. Independent Studies in Health Services Administration**Credits 1.00-3.00 PeopleSoft Course ID 014276 Grading Basis GRD**

An independent study for students to pursue independent research or experiential learning opportunity in health services administration under the guidance of a faculty adviser. Students will work under the supervision of a faculty member. Course may be repeated for a maximum of six credits if the topic varies.

History

HIST 101. World History to 1500 [C2HQC]**Credits 3.00 PeopleSoft Course ID 005528 Grading Basis GRD**

A survey of important historical developments from prehistoric times to 1500. Emphasis is given to the rise and decline of great world civilizations and their lasting contributions to humanity. May be used for general education credit.

HIST 102. World History Since 1500 [C2HQC]**Credits 3.00 PeopleSoft Course ID 009828 Grading Basis GRD**

A survey of important historical developments from 1500 to the present. Emphasis is given to the growth of nationalism, the development of colonialism, and to world events, problems, and conflicts of the present century. May be used for general education credit.

HIST 150. Critical Issues in Recent Global History [C1CT]**Credits 3.00 PeopleSoft Course ID 010505 Grading Basis GRD**

This course examines issues in recent history as a means to introduce, develop and enhance critical thinking skills and to supplement writing, oral communication, library and computing skills objectives for General Education Cluster One. A seminar format allows for careful examination of issues in both oral and written formats. The course emphasizes the development and articulation of well-reasoned arguments in organized and grammatically acceptable prose. May be used for general education credit. May not be used for major credit.

HIST 225. U.S. History [C4AE]**Credits 4.00 PeopleSoft Course ID 003740 Grading Basis GRD**

A survey of U.S. history from the Colonial period to the present, emphasizing the development of American civic life, the involvement of the U.S. in world affairs and the cultural richness of the American people. This course stresses the analysis and interpretation of primary sources. May be used for general education credit.

HIST 225H. U.S. History - Honors [C4AE]**Credits 4.00 PeopleSoft Course ID 000420 Grading Basis GRD**

A survey of U.S. history from the Colonial period to the present, emphasizing the development of American civic life, the involvement of the U.S. in world affairs and the cultural richness of the American people. This course stresses the analysis and interpretation of primary sources. May be used for general education credit. **Prerequisite(s):** *Honors Students*

HIST 239. Topics in History**Credits 3.00 PeopleSoft Course ID 012453 Grading Basis GRD**

The study of selected topics in history at the introductory level.

HIST 263. Africa**Credits 3.00 PeopleSoft Course ID 002075 Grading Basis GRD**

Emphasis is placed on the social and cultural aspects, as well as the emerging role the continent plays in contemporary world history.

HIST 274. Modern East Asia

Credits 3.00 PeopleSoft Course ID 008939 Grading Basis OPT

This course is an introduction to modern historical experiences of East Asia, particularly China, Japan and Korea. In addition to overviews of each of these countries, the course will focus on several topics illustrating both the unity and diversity of East Asia: perceptions of each other, the philosophical tradition of Confucianism, the role of imperialism and nationalism, revolution, reform and the future of the region in the twenty-first century.

HIST 299. Putting History Skills to Work**Credits 1.00 PeopleSoft Course ID 014505 Grading Basis CNC**

This course is aimed at helping our majors transition to careers using history. Students will learn about where to look for a job, how to get it and how to thrive in it. Students will hear about the career paths of history majors. Students will produce a job-market oriented product such as a cover letter, a resume or other product that would help them in searching for a post-college job. **Prerequisite(s):** *History major*.

HIST 300. Historical Thinking**Credits 3.00 PeopleSoft Course ID 014477 Grading Basis GRD**

A seminar that introduces students to the methodological questions central to the discipline of history. Students learn how to recognize and appreciate the diversity of historical interpretation; how to identify, locate and interrogate secondary and primary sources; how to integrate critical analysis of evidence into writing; and how to employ different modes to present historical knowledge. Open to all students but required of history majors.

HIST 302. Plazas, Protests and Processions: An Urban History of the Americas**Credits 3.00 PeopleSoft Course ID 013134 Grading Basis GRD**

There is no group of people in the world more urban-minded than Latin Americans. Historically, cities in this region played an all-encompassing role that included administration as well as the reproduction of capital and responsibility for virtually all cultural activities. This class explores that history alongside plans for further urban development, cultural activities and architectural design.

HIST 303. Virginia's Place in #VastEarlyAmerica**Credits 3.00 PeopleSoft Course ID 013242 Grading Basis GRD**

This course will examine the history of early America from the colonial to the early national period. Topics will include the clash of African, European and Native American cultures, the regionalization of the American colonies, the growth of American slavery, and the creation of an American character and politics.

HIST 304. Native Peoples of the United States**Credits 3.00 PeopleSoft Course ID 013243 Grading Basis GRD**

A survey of the experiences of Native Peoples, including Native Hawaiians and Native Alaskans, from the pre-contact period to the present, with emphasis on traditional lifeways, impact of Anglo Americans, cultural persistence and revivals, activism, and contemporary challenges to Native communities and identities.

HIST 305. History of Science and Christianity**Credits 3.00 PeopleSoft Course ID 012182 Grading Basis GRD**

Over the last 2000 years, there have been recurring controversies over the proper relationships between science and Christianity. This class uses case studies such as Galileo, Darwin and creationism to explore the larger cultural context that gave life to the controversies. In the process, we'll examine changing ideas of what counts as science, how to interpret the Bible, and who gets to decide.

HIST 306. A History of the Body in the West**Credits 3.00 PeopleSoft Course ID 013313 Grading Basis GRD**

This course views the human body as a historical artifact whose physical appearance and social, cultural, and political meanings reflect the historical contexts of specific times and places. The emphasis is on the perspectives of Europeans and their descendants, inside Europe and beyond it.

HIST 307. The Trans-Atlantic Slave Trade**Credits 3.00 PeopleSoft Course ID 012120 Grading Basis GRD**

This course explores the origins, processes and outcomes of the infamous trade. By studying participants' lives in Africa, Europe, Latin America and North America, the course helps students understand people's inhumanity to each other and the ways in which slavery and the trade in slaves forever altered the development of the Atlantic world.

HIST 308. Contemporary Italian History and Culture

Cross listed with: *ITAL 308*.

Credits 3.00 PeopleSoft Course ID 006281 Grading Basis GRD

A study of Italian society, economics, politics and the arts from 1814 to the present. Instruction in English. (Research papers for Italian majors/minors in the language).

HIST 309. French History Since 1648**Credits 3.00 PeopleSoft Course ID 013105 Grading Basis GRD**

A survey of important historical developments in France from 1648 to the present. It explores how complex historical legacies in French society define and shape the experience of "being French" and how different groups and citizens work with and against each other in a collective effort to define the early modern and modern French experience. Points of focus include economy, society, culture and religion, state, politics, and borders.

HIST 311. China to 1600**Credits 3.00 PeopleSoft Course ID 014023**

A survey of Chinese history from its earliest origins to the fall of the Ming Empire in the 17th century. The course incorporates translated primary materials and modern scholarship to provide a general picture of Chinese state formation, socio-economic changes, and literature and arts during the three millennia. It will also discuss the teachings and intellectual impacts of Confucianism, Daoism, and Buddhism in East Asia through the ages.

HIST 312. Japan Since 1600**Credits 3.00 PeopleSoft Course ID 013816**

A survey of Japanese history from the end of the Warring States Period to the present. It first introduces Tokugawa society in the 17th and 18th centuries and then examines the Meiji period in detail, focusing on political and cultural changes, the rise of ultra-nationalism, the military expansion before WWII, and the course of the war. The last part of the course will discuss the American occupation, postwar developments, and the last two decades in Japan.

HIST 313. The History of Latinos in the United States**Credits 3.00 PeopleSoft Course ID 013997 Grading Basis GRD**

Currently the largest minority group in the U.S., Latinos have diverse sociological and historical origins, yet today in the U.S. are thought of as a monolithic racial and ethnic group. Starting with the Spanish and Portuguese colonial enterprise and continuing through current debates, this class will provide an introduction to and overview of the broad scholarship on Latino and Hispanic identity in the United States, examining issues of coercion, migration, refugees, labor, family networks, religion, war, economics, state building, politics, racialization, international disputes and globalization.

HIST 314. Plagues, Saints and Empires: The World before 1500**Credits 3.00 PeopleSoft Course ID 014325 Grading Basis GRD**

This course will look at themes and patterns in world history before 1500.

Topics will include practical issues, such as ways to feed people and develop

trading networks; different ways to run increasingly complicated societies, from small nomadic groups to cities to empires; patterns of disease and epidemics and environmental changes; the changing roles of ideas and religions and education; varying ideas about gender roles and class structures; and many ways people tried to integrate different peoples, cultures and ideas into a unified society.

HIST 315. Global History of Sport

Credits 3.00 PeopleSoft Course ID 007303 Grading Basis GRD

An interpretive study of the role of sports globally. Time periods and specific nations will vary depending on the faculty member teaching the course, but all will consider sport across time and place.

HIST 316. The Life and Times of James Madison, 1751-1836

Credits 3.00 PeopleSoft Course ID 011913 Grading Basis GRD

An overview of the major political, philosophical, social and literary events that helped shape the world of the founders. James Madison's life will provide the framework for the course and emphasis will be given to his important role during this era.

HIST 318. Our Better Angels?: The World History of Violence

Credits 3.00 PeopleSoft Course ID 014479 Grading Basis GRD

An interdisciplinary and comparative exploration of human violence. The course uses theoretical studies and empirical research to address big questions about the kinds, causes and consequences of violence in human societies from the deep past to the present. Students examine everyday and extraordinary forms of violence, debate if and how violence has declined across time, and learn to use historical methodologies to better understand conflict and coercion in today's world.

HIST 319. Women at Work in U.S. History

Credits 3.00 PeopleSoft Course ID 014083 Grading Basis GRD

This course examines the experiences of women employed in a variety of industries and workplaces in twentieth-century U.S. history. Topics include women's employment opportunities, experiences of sexism and other biases, collective action to change working conditions, innovation and entrepreneurship of women, and popular culture portrayals of gender in workplaces.

HIST 320. Women in U.S. History

Credits 3.00 PeopleSoft Course ID 005864 Grading Basis GRD

A survey of the role of women in the United States from the Colonial period to the present. Attention is given to contributions of the ordinary women, the Women's Rights movements, the impact of women on reform and political movements, and the changing status of women in society.

HIST 321. Gender and Sexuality in Modern Europe

Credits 3.00 PeopleSoft Course ID 001890 Grading Basis GRD

This class examines categories of gender, masculinity and femininity, as well as patriarchy and sexuality in the context of Modern Europe. The course will cover the significance of Republican Motherhood, the birth of feminism, the effects of empire, war and dictatorship on gender and sexuality, and the contradictions of sexuality and morality in Europe from the 18th to 20th centuries. With an emphasis on transnationalism, the course gives special attention to issues of gender and sexuality in England, France, Germany and the former Soviet Union. These same topics will be discussed in the context of European Empire.

HIST 322. Jim Crow South

Credits 3.00 PeopleSoft Course ID 011082 Grading Basis GRD

During the era of Jim Crow—a period that spanned the years from the 1890s to the civil rights movement of the 1950s and 1960s—state laws, municipal ordinances and social customs racially segregated public and private life across

the American South. Jim Crow, as both legal framework and social practice, shaped the everyday lives of three generations of Southerners, both black and white. This class examines the complexities of segregation—its legal boundaries, its social and cultural peculiarities, and its violent enforcement. It especially focuses on the political actions that challenged and eventually dismantled it.

HIST 323. The Old South

Credits 3.00 PeopleSoft Course ID 003910 Grading Basis GRD

Economic, cultural and social history of the antebellum South; 1790-1860. The region's political history will serve as a supporting part of the course.

HIST 326. How Cars Changed Everything

Credits 3.00 PeopleSoft Course ID 011036 Grading Basis GRD

This course uses the automobile as a window into 20th century American life. It examines the influence of automobility on patterns of work and leisure; on struggles over gender, race and ethnicity; on individualism, consumerism and government regulation. It also surveys mass automobility's effects on our physical and natural environments and looks at future prospects of automobility in the information age.

HIST 327. Makers, Users, Skeptics and Thieves: Americans and Their Technologies

Credits 3.00 PeopleSoft Course ID 010836 Grading Basis GRD

Americans — individuals and groups — have used technology to do many things; some good, some bad. Never has it been neutral. This course explores the complex and changing relationship between technology and American society from Native American canoes in the 17th century to Facebook trolling in the early 21st Century, paying particular attention to technology's role in America's dynamic gender, race and workplace relationships along the way.

HIST 328. Towers, Time and Technology on the Eve of World War I

Credits 3.00 PeopleSoft Course ID 014585 Grading Basis GRD

This course traces the intellectual, technical, mechanical and scientific developments that had a profound effect on the ways people saw and understood their world from 1880-1914. The course explores peoples' relationships to the environment; state structures; and turn-of-the-century revolutionary political, economic and cultural ideas with a focus on Europe, the US and the impact of "western" technological change on the world.

HIST 331. Historical Archaeology

Cross listed with: ANTH 331

Credits 3.00 PeopleSoft Course ID 010841 Grading Basis GRD

The course introduces students to the purposes, subject matter, methodology and historical background of the discipline of historical archaeology. Building on research issues and methodologies of anthropological archaeology and history, the multidisciplinary aspects of this field are introduced through field trips, projects, guest lectures, readings and classroom presentations.

Prerequisite(s): Prerequisite: ANTH 197.

HIST 332. History of Twentieth Century Spain

Credits 3.00 PeopleSoft Course ID 012531 Grading Basis GRD

This course will trace the twentieth-century political and social history of Spain including the Second Republic, the Spanish Civil War, the Franco regime, and the transition to democracy in 1975. The course will pay special attention to Franco's dictatorship, the role of women, the Catholic Church, as well as Spain's relationship to the rest of Europe.

HIST 333. Maps, Money, Manufacture and Trade

Credits 3.00 PeopleSoft Course ID 013325 Grading Basis GRD

This is an interdisciplinary class designed to integrate perspectives from various disciplines, especially history, geography and economics, into a

coherent account of an increasingly globalized world. Particular attention will be paid to map construction and use (both historical and contemporary) and the relationship between economic ideas and world events. The class will focus on a variety of case studies over the last millennium.

HIST 334. A Global History of Nationalism

Credits 3.00 PeopleSoft Course ID 014478 Grading Basis GRD

This course examines the modern origins of nationalism, its historical development as a political and economic theory, and its consequences, including ethnic cleansing and genocide, in a variety of case studies in order to answer these and other questions. The course will consider questions such as: What is nationalism? Do nations create nationalism or does nationalism create nations? Why does the modern world vest sovereignty in the nation? This course is intended to fulfill requirements for the International Affairs major.

HIST 335. Topics in Applying History

Credits 3.00 PeopleSoft Course ID 014483 Grading Basis GRD

This course guides students in applying historical thinking and the use of evidence outside the classroom. The course meets the Applying History requirement. Topics and approaches will vary by instructor. Course can be repeated for credit with different instructors and themes.

HIST 336. We the People?: The American Revolution Considered

Credits 3.00 PeopleSoft Course ID 014484 Grading Basis GRD

This course will advance understanding of the political, economic, social, cultural and intellectual history of the events that led to the formation of the United States as an independent democratic republic. This dynamic course considers the causes and consequences of the American Revolution, and examines questions such as: How high were taxes really? Why was throwing tea in the harbor the height of political intrigue? Why does every politician claim they are doing what the Founding Fathers would have wanted — and are all those other folks just wrong?

HIST 338. U.S. Urban History

Cross listed with: SOCI 338

Credits 3.00 PeopleSoft Course ID 011867 Grading Basis GRD

In this course students explore the history of urban spaces in the United States by investigating American cities using a broad chronological, geographical, and thematic framework. Drawing from an array of primary and secondary sources, students will become familiar with the central themes of urban history, and also have the opportunity to produce their own narratives.

HIST 339. Selected Themes in U.S. History

Credits 3.00 PeopleSoft Course ID 006059 Grading Basis GRD

Selected themes are studied in depth. See MyMadison for current classes. Course may be repeated when content changes.

HIST 340. Internship in History

Credits 3.00 PeopleSoft Course ID 003725 Grading Basis GRD

Provides students with practical experience in using historical skills in a public or private entity. Periodic student reports and seminar meetings required. This course may be repeated with permission of department head. **Prerequisite(s):** HIST 300, junior or senior standing, and permission of the history internship coordinator.

HIST 341. Selected Themes in World History

Credits 3.00 PeopleSoft Course ID 000315 Grading Basis GRD

Selected themes are studied in depth. Course may be repeated when content changes. Only courses with significant content outside of Europe will count toward the world history requirement. See MyMadison and the history department website for information on current classes.

HIST 342. Selected Themes in European History

Credits 3.00 PeopleSoft Course ID 014112 Grading Basis GRD

Selected themes are studied in depth. See MyMadison and the history department website for information on current classes. Course may be repeated when content changes.

HIST 343. History of Today

Credits 3.00 PeopleSoft Course ID 014481 Grading Basis GRD

In this course, students will use history to help understand the present. Whether it's applying historical questions to contemporary settings, leveraging historical skills to analyze current events or offering historical context to divisive issues, history can aid in thinking through the problems of today and even the possibilities of tomorrow.

HIST 344. Magic Mountains, Man-eating Beasts and Unquiet Woods: An Environmental History of British India

Credits 3.00 PeopleSoft Course ID 014467 Grading Basis GRD

This course examines the history of British India during the 19th and 20th centuries in relation to how the British colonial state interacted with India's natural environment. Students will learn how the British attempted to understand and control India's hilltops, forests and wildlife in effort to govern more efficiently, profitably and effectively. They will learn that this was not without challenges, however, as colonized subjects spoke up and acted out against British authority.

HIST 345. Pills and Potions: Histories of U.S. Health Care and Medicine

Credits 3.00 PeopleSoft Course ID 014480 Grading Basis GRD

This course explores the history of attempts to heal Americans from disease over four centuries. The course will consider the complex interplay of scientific ideas about disease with the social and cultural contexts that shaped the experiences of people in accessing health care. Students will consider the increasing success with which medicine has healed the body, and the development of the medical professions from the late eighteenth century to the present. The course will also consider issues of public health as opposed to individual medical practice. Governments' and corporations' inevitable influence on public health measures, as the example of cigarettes shows, will be addressed. The influence of race, class and sex on how bodies are viewed and healthcare is received will be discussed.

HIST 346. Law and Order: British India

Credits 3.00 PeopleSoft Course ID 014506 Grading Basis GRD

This course covers the new British criminal code that redefined what constituted a crime and identified who was a criminal in the 19th century. Students will examine the nature of elite classes and the character of their relationship with subordinate classes. In addition, students will examine crime statistics and crime reports that provide information about behavior and experiences of people at the bottom of colonial society.

HIST 347. Advertising America

Credits 3.00 PeopleSoft Course ID 014507 Grading Basis GRD

This course provides an analysis of advertising's roles in U.S. society from the late nineteenth century through the present. The course uses advertisements and other primary sources to consider how the advertising industry has shaped and reflected social norms, including ideas about gender, race, class, religion, sexuality and age. It will also consider the influence of advertising on art, entertainment and politics.

HIST 348. Maps and Mobility in Islamic World History

Credits 3.00 PeopleSoft Course ID 014508 Grading Basis GRD

Islam arose out of established patterns of commercial mobility and cultural exchange, but it also produced new local and global movements and circulations that are a primary concern of this course. The annual hajj

pilgrimage to Mecca, pastoral and nomadic seasonal migrations, inland and port city market relations, imperial capital supply systems, and Islamic travel literature anchor the mobility pillars of the course. While Islam generated new kinds of migrations and interactions, it also produced new cartographic structures and sensibilities built around new geographies, sciences and world views. European colonialism and nationalist movements in the Islamic world generated additional historical layers of mapping pressures, possibilities and realities. Islamic, European and national maps in the Muslim world form the cartographic pillars of the course.

HIST 350. Virginia

Credits 3.00 PeopleSoft Course ID 002730 Grading Basis GRD

An interpretive survey of the history of Virginia from its Colonial beginnings to the present time.

HIST 351. War in Afghanistan: Local and Global Perspectives

Credits 3.00 PeopleSoft Course ID 014486 Grading Basis GRD

This course offers critical perspectives on war in Afghanistan from historical and contemporary local and global perspectives. This course considers the philosophy of war and the Anglo-Afghan Wars (1839-1919). The course then deals with U.S.-Afghan relations during the Cold War, and covers the post-9/11 period. In the context of war in Afghanistan, the course provides critical analyses of democracy, inequality, neoliberalism, power and race.

HIST 352. The Premodern Middle East: Themes and Intersections

Credits 3.00 PeopleSoft Course ID 011764 Grading Basis GRD

A thematic introduction to the premodern Middle East, the course emphasizes the political, social and religious developments that have shaped the region's diverse communities and connected them to world history.

HIST 353. International and Multicultural Histories of the Modern Middle East

Credits 3.00 PeopleSoft Course ID 001630 Grading Basis GRD

This course positions the Middle East in global cultural processes since the rise of Islam. It focuses on linguistic, commercial, religious, imperial and national development and interaction in the region between the Nile and Indus Rivers. The first part of the course considers Arab, Persian and Turkish cultural and historical contributions to the rise and expansion of Islam from roughly 600-1500. The second part of the course examines the Ottoman, Safavid and Mughal empires with an emphasis on literary and artistic developments until about 1800. The third part examines European colonialism and nationalist activity in Palestine and Iran, and projections of American interests through educational exchange and development programs from the Cold War through the present.

HIST 356. African American History Since 1865

Credits 3.00 PeopleSoft Course ID 004236 Grading Basis GRD

A survey of the experience and changing status of African Americans in the United States from Reconstruction to the present, emphasizing the strengthening of social and cultural institutions; Afro American leadership; the impact of segregation; the Great Migration; labor, protest and cultural movements; pan-Africanism; the Civil Rights Movement; and contemporary issues.

HIST 357. Fates of Empires

Cross listed with: POSC 457

Credits 3.00 PeopleSoft Course ID 012674 Grading Basis GRD

Fates of Empire looks at several different historical empires to gain an interdisciplinary perspective on what makes empires succeed or fall apart. The course will apply a variety of theoretical approaches from history, political science, economics and geography to consider each case study and the broader concept of empire.

This class is particularly aimed at students in the social studies teacher licensure programs, to help them learn how to apply the history in middle and high school classrooms. **Corequisite(s):** For students with an ISS minor, this course must be taken with MSSE 412.

HIST 358. Modern Africa, ca. 1800-1990s

Credits 3.00 PeopleSoft Course ID 014590 Grading Basis GRD

This course examines selected critical themes in the history of modern Africa. It explores historical transitions and challenges in making societies, economies and states. The thematic focus transcends traditional chronological boundaries to enable students to understand continuities and disruptions, the historical trajectories of Africa's complex situation, and its position in the world.

HIST 360. Research Apprenticeship in History

Credits 3.00 PeopleSoft Course ID 011259 Grading Basis GRD

Provides students with advanced research and writing opportunities. Student learning contract must be approved before a student can enroll. Periodic student reports and seminars required. Open to history majors only.

HIST 362. American Material Religion

Cross listed with: We are ending the cross-listing agreement with Religion.

Credits 3.00 PeopleSoft Course ID 011970 Grading Basis GRD

This course explores material religion in the history of the United States. Building on the insight that religions are embodied, material forms of practice, the course investigates the place of food, clothing, objects, buildings and landscapes in an array of religions throughout U.S. history.

HIST 365. Topics in Connected History

Credits 3.00 PeopleSoft Course ID 014509 Grading Basis GRD

The Connected History requirement offers classes that think historically about big-picture issues in a global context. Classes might consider regions or the globe. Topics and areas of the world will change with each instructor. Students may repeat this class for credit with different themes and instructors.

HIST 368. Blurred Borders: A Cultural History of the Caribbean, Latin America and the United States

Credits 3.00 PeopleSoft Course ID 007321 Grading Basis GRD

This course explores the political, social and diplomatic relations between the United States, the Caribbean and Latin America. In each of these regions, Europeans, Africans and indigenous peoples came together in unequal colonial systems after 1492. The course will analyze cultural expressions such as theater, literature, music, film, poetry, essays and diplomatic correspondence to examine the interconnectedness of these regions and explore how the identities of these territories are shaped in connection to one another.

HIST 369. Greek History, 3000 BC-AD 267

Credits 3.00 PeopleSoft Course ID 012557 Grading Basis GRD

Greek history covers the political, military, social, economic and intellectual history of the Greeks from the beginning of the Bronze Age ca 3000 BC until the Roman occupation of Greece. It ends with the sack of Roman Athens by the Heruli in AD 267. The course is a mixture of lectures and discussions of primary sources. Students will read all of the major Greek historians (Herodotus, Thucydides, Xenophon, Polybius).

HIST 370. Byzantine Empire

Credits 3.00 PeopleSoft Course ID 001292 Grading Basis GRD

A survey of the political, economic, military and religious history of the Byzantine Empire, 330-1453.

HIST 371. India

Credits 3.00 PeopleSoft Course ID 002652 Grading Basis GRD

A survey of the history of the Indian subcontinent from antiquity to the present. The course stresses the arrival of Islam, the impact of Western colonization, the

struggle for independence, and the problems and achievements of nationhood in the post-Colonial era.

HIST 372. Afghanistan in Regional and Global Systems

Credits 3.00 PeopleSoft Course ID 012160 Grading Basis GRD

The country's Silk Road heritage, early Islamic experience, and frontier status between Safavid Iran and Mughal India introduce modern Afghanistan's origins within British Indian colonialism and global capitalism. Twentieth-century and contemporary Afghanistan are engaged through concepts of modernity, nationalism, internationalization and local social and cultural resilience and adaptation.

HIST 373. History of the Ottoman Empire, 1453-1922

Credits 3.00 PeopleSoft Course ID 013824

This course surveys the history of the Ottoman Empire from its roots in medieval Anatolia through its demise in World War One. We will examine the persons, events, institutions, and ideas associated with imperial state formation, military expansion, cultural elaboration, political reformism, and the evolution of modern identities.

HIST 374. The Southern Plantation: Race, Space and Gender in an American Landscape

Credits 3.00 PeopleSoft Course ID 014487 Grading Basis GRD

This course explores the plantations of the American South, both physical and imagined spaces. It challenges students to consider the spatial boundaries of the plantation, offering an examination of African trading posts, American slave markets and small courthouse towns along with the dwellings, outbuildings, fields and gardens of antebellum commercial slave agriculture. This broader spatial history framework uses a number of historical subfields, particularly architectural, environmental and public history, exposing students to a variety of scholarly perspectives. The class incorporates a wealth of primary material from diverse authors and points of view, including slave narratives, government records, travel accounts, letters, novels, paintings and architectural drawings, in order to demonstrate that the same physical landscape can be perceived differently depending on the viewer's perspective and experience. The course also includes on-site visits to two historic plantations.

HIST 377. History of Korea

Credits 3.00 PeopleSoft Course ID 010837 Grading Basis GRD

A survey of Korean history from its earliest times to the present day. It is designed to develop an understanding in Korea, its historical tradition and the place of Korea in the larger narrative of East Asia and world history.

HIST 378. China in the Modern World

Credits 3.00 PeopleSoft Course ID 012456 Grading Basis GRD

This course is an exploration of China's encounters with the modern world and the ways in which China has, and has not, changed as consequence of those encounters. Topics include the impacts of both Western and Japanese imperialisms; participation in international systems; adaptations of Christianity, democracy and communism; and the resulting upheavals in Chinese Society.

HIST 382. Europe in the 20th Century

Credits 3.00 PeopleSoft Course ID 012609 Grading Basis GRD

This course is a survey of European history covering the late-imperial era, the world wars, the Cold War and the dynamics of European integration. Emphasis will be given to political, social, economic and cultural developments. Upon completing the course, students will be able to demonstrate knowledge of major movements, figures and events in twentieth-century European history.

HIST 383. Early England

Credits 3.00 PeopleSoft Course ID 006585 Grading Basis GRD

A survey of English history from the earliest times to the late 17th century. Particular attention is given to the rise of Parliament and the growth of limited monarchy.

HIST 385. The Russian Empire

Credits 3.00 PeopleSoft Course ID 003857 Grading Basis GRD

This course examines the history of Russia as a world power under tsarist rule, including the development of the autocracy, the adoption of Orthodoxy, and the establishment and abolition of serfdom. It explores attempts to reform Russia from above and below and investigates the relationships between state, society and the masses. It also considers the impact of gender, empire and revolution on imperial Russian history.

HIST 386. The Soviet Union: A Socialist Experiment

Credits 3.00 PeopleSoft Course ID 005271 Grading Basis GRD

In 1917, a party of revolutionaries established the world's first socialist state. Although inspired by the goals and lessons of the Enlightenment and the French Revolution, the lived experience of Soviet socialism was characterized by enormous suffering, violence and death. Yet during the more than 70 years of its existence, the Soviet Union also accomplished much that was good, even extraordinary. This course examines the main features, successes and failures of the Soviet socialist experiment from its revolutionary origins in the 1860s through its collapse in 1991.

HIST 387. The History of Ideas in the Modern World

Credits 3.00 PeopleSoft Course ID 014602 Grading Basis GRD

This course will examine the history of ideas from a range of disciplines in the nineteenth and twentieth centuries and how they have affected Western and global political, social and cultural trends. Instead of merely surveying ideas, the course will trace specific schools of thought over time, emphasizing the close analysis and contextualization of thinkers and ideas.

HIST 388. Germany Since 1871

Credits 3.00 PeopleSoft Course ID 005968 Grading Basis GRD

A survey of German history during the Second Reich, World War I, the Weimar Republic, the Third Reich and the post-World War II periods of Cold War and Detente. Emphasis is given to political, diplomatic and military affairs, although social, economic and cultural developments are included.

HIST 389. Revolution and Radical Change in Modern Europe

Credits 3.00 PeopleSoft Course ID 014589 Grading Basis GRD

This course covers the turbulent history of revolution and radical political change in modern Europe, beginning with the French Revolution of 1789 and ending with the overthrow of the communist dictatorships in Central-Eastern Europe near the end of the twentieth century. Students will gain in-depth knowledge of the causes, chronologies and outcomes of modern Europe's many political revolutions. We will also examine how revolutions have—at times—generated tremendous social, economic and/or cultural change.

HIST 390. Special Studies in History

Credits 3.00 PeopleSoft Course ID 001426 Grading Basis GRD

This course is designed to give capable students in history an opportunity to complete independent study under faculty supervision. **Prerequisite(s):** *Department head permission.*

HIST 391. Travel Studies Seminar

Credits 3.00 PeopleSoft Course ID 005478 Grading Basis GRD

Designed to encourage the student to augment the regular academic program through independent investigation including organized travel-study.

Pearrangements must be made with a designated faculty member who will direct the study with preparatory instructions and final requirements.

Prerequisite(s): *Permission of the department head.*

HIST 394. Introduction to Museum Work

Cross listed with: ARTH 394

Credits 3.00 PeopleSoft Course ID 001570 Grading Basis GRD

A study of the philosophy and practice of museum work including the areas of exhibit design, conservation registration, education and administration. Subject is taught from the perspective of the museum profession and is applicable to diverse disciplines and types of collections.

HIST 396. History Beyond the Classroom: Public History

Cross listed with: ARTH 396

Credits 3.00 PeopleSoft Course ID 010502 Grading Basis GRD

This course introduces the interdisciplinary subfield of public history as it is practiced today. The course examines the various branches of public history through readings, class discussion, exercises, and occasional guest speakers and field trips, when possible.

HIST 397. U.S. Military History

Credits 3.00 PeopleSoft Course ID 000663 Grading Basis GRD

A survey of the evolution of the American way of war from the Colonial era to the post-Cold War period emphasizing the development of military and naval institutions, U.S. strategic doctrine and the social legacies of the U.S. military establishment.

HIST 398. European Military History

Credits 3.00 PeopleSoft Course ID 002646 Grading Basis GRD

A survey of European military history (including Russia/Soviet Union) from the Hellenistic period through the 1982 Falklands-Malvinas War. The evolution of strategic doctrine and military institutions, their effect upon European society and their role in European imperialism will be emphasized.

HIST 401. Research Capstone Topics

Credits 3.00 PeopleSoft Course ID 014485 Grading Basis GRD

The 400-level history capstones provide students with an integrative intellectual experience building on the skills and habits of mind that have been cultivated during their program. These capstones focus on a culminating project (e.g., a research paper, historiography paper, museum exhibit, website, teaching unit, podcast, briefing paper, op-ed, etc.). Students immerse themselves in a topic and make it their own.

Topics and research projects will change with each instructor. Students may repeat the course for credit if taken with different instructors. **Prerequisite(s):**

HIST 300 strongly recommended, but not required.

HIST 402. Workshop in Colonial American Life

Credits 3.00 PeopleSoft Course ID 003612 Grading Basis GRD

A comparative study of life in colonial and Revolutionary America. Required field trips may include Jamestown, Colonial Williamsburg, Philadelphia, Charleston and Lancaster County, PA. Published sources, lectures, films and two multi-day field trips are used. Supplemental fee required.

HIST 403. Workshop in Civil War Virginia

Credits 3.00 PeopleSoft Course ID 010927 Grading Basis GRD

This workshop examines the impact of the Civil War upon Virginia and its citizens. It explores the secession crisis, the revolution in firepower that forced changes in battlefield tactics and war aims, and the development of "hard war."

A four-day battlefield tour will reinforce ideas discussed in the classroom.

Supplemental fee required.

HIST 404. Science and Society in Early Modern Europe

Credits 3.00 PeopleSoft Course ID 013046 Grading Basis GRD

Examines the connections between knowledge of the natural world and other aspects of European societies between 1500 and 1700. Topics may include the scientific revolution (Copernicus, Galileo and Newton); medicine, anatomy, and

ideas of disease; exploration, commerce and natural history; technology and empire; alchemy, astrology, and the boundaries of science; and comparisons between science in Europe and in other areas of the world.

HIST 405. Travel and Exploration

Credits 3.00 PeopleSoft Course ID 004837 Grading Basis GRD

This class is about travel and exploration in world history, using specific episodes to examine motives, consequences and the experience of travel. In studying long-distance trade, pilgrimages, voyages of exploration and discovery, and even tourism, we will look at the logistics of travel, attempts to map the world, and the difficulties people had in interpreting what they found.

HIST 406. Monticello

Cross listed with: ARTH 406

Credits 3.00 PeopleSoft Course ID 010612 Grading Basis GRD

A seminar on the architecture and material culture of Thomas Jefferson's Monticello. The course will examine the house's design, artwork, decorative arts, mechanical devices, landscape/garden design and Mulberry Row. Topics will include African American artisans at the Monticello joinery, Jefferson's Indian Hall, and European and African American domestic life in the Federal Period. Required field trips. **Prerequisite(s):** *Permission of the instructor.*

HIST 407. Digital History

Credits 3.00 PeopleSoft Course ID 013423 Grading Basis GRD

This course will provide an introduction to digital history. It explores some of the ways in which digital technologies can change how we research, write, document, exhibit, produce, and think about history. Students should not expect to become an expert in any single technology, but will develop a familiarity with a wide range of tools and applications and will have the chance to create their own digital history project.

HIST 408. The Museum: Histories and Controversies

Cross listed with: ARTH 408

Credits 3.00 PeopleSoft Course ID 011799 Grading Basis GRD

This seminar centers on art museums in the United States. Topics include the historical development of museums, related cultures of display, recent debates on institutional mission and responsibility, and contemporary artists who employ the museum as medium, subject matter or site. Required field trips.

Prerequisite(s): *ARTH 206 or permission of the instructor.*

HIST 409. Early Modern Atlantic History

Credits 3.00 PeopleSoft Course ID 013424 Grading Basis GRD

This course focuses on the history of the North and South American Atlantic World from the "Age of Exploration" to the "Age of Democratic Revolutions." It traces European exploration of and expansion into the South and later North Atlantic beginning in the fourteenth century, and concludes with the assertion of sovereignty and independence by European colonies throughout the extended Atlantic littoral.

HIST 411. Colonial and Revolutionary North America

Credits 3.00 PeopleSoft Course ID 006423 Grading Basis GRD

This seminar explores the history of North America from the 16th through the 18th centuries. Thematic emphasis will vary from semester to semester.

HIST 412. Early American Cultural History

Credits 3.00 PeopleSoft Course ID 014510 Grading Basis GRD

This course will consider the experiences of peoples of early North America through the lens of cultural history. Topics may include: how people ate, dressed, bathed (or didn't) and thought about politics, consumption, health and manners. These seemingly routine life practices are a window into fundamental ways of understanding the world.

HIST 413. The Anglo American Constitutional Tradition, 1603-1791

Credits 3.00 PeopleSoft Course ID 011260 Grading Basis GRD

This course surveys Anglo American political and constitutional traditions. Emphasizes the evolution of 17th- and 18th-century British constitutionalism, its transfer to the British North American colonies, and the development of the first national and state constitutions in the United States.

HIST 420. Mobs, Taxes, War and Laws: The American Revolution**Credits 3.00 PeopleSoft Course ID 007288 Grading Basis GRD**

An interpretive study of the political, economic, social and cultural history of the United States from the French and Indian War through the Federalist period.

HIST 422. Spaces and Places of the Early United States**Credits 3.00 PeopleSoft Course ID 003800 Grading Basis GRD**

This seminar explores the history of the early United States from the Constitution to the Civil War through original primary source research and scholarly studies that illuminate the organization, meaning and influence of its spaces and places.

HIST 425. Civil War and Reconstruction**Credits 3.00 PeopleSoft Course ID 002104 Grading Basis GRD**

A study of the background, development, personalities and aftermath of the Civil War. Special attention is given to the coming of the war and different explanations of its causes and to the policies and significance of Reconstruction, with varying interpretations thereof.

HIST 427. U.S. Environmental History**Credits 3.00 PeopleSoft Course ID 011909 Grading Basis GRD**

An interpretive study of the development of environmental thought in the United States. Emphasis is given to philosophies of nature, land and resource usage and conservation, the environmental movement and organizations, environmental activism and radicalism, landscape restoration, and environmental mitigation and protection.

HIST 435. History of Immigration to the United States**Credits 3.00 PeopleSoft Course ID 014084 Grading Basis GRD**

The United States is a land populated by migrants. Most residents of the U.S. today trace their ancestry to Latin America, Europe, Asia or Africa. The U.S. has been both the largest receiving destination of immigrants in the last two hundred years and the inventor of modern border restrictions. This course surveys patterns of migration and immigrant experience from colonial times to the present. Students will consider migration to the United States as part of the evolving global labor market and colonial expansion in the modern world. Students will learn about the relationship of immigration to nation-building, national expansion, war, and the production and reproduction of national identity. Students will also learn about the history of the legal regulation of immigration, the political debates surrounding the role of immigration in society and the experience of immigrants in settling and negotiating life in a new society. Students will explore immigration history by exploring a rich array of primary source material: fiction, memoirs, government documents, oral history interviews, films, maps and more.

HIST 436. Afro-Latin America

Cross listed with: ANTH 436

Credits 3.00 PeopleSoft Course ID 012174 Grading Basis GRD

Latin America and the Caribbean were the first and largest parts of the Western Hemisphere to be populated by Africans. Afro-Latin America examines cultural formations Africans brought to these regions. Beginning with an overview of the slave trade, it examines the histories of Africans and African-descent people throughout Latin America, as well as contemporary Afro-Latin American

culture(s). **Prerequisite(s):** One course in either Latin American or African studies (any discipline); upper-division status or permission of the instructor.

HIST 437. Latin America and Latin Americans through Film: Focus on the Twentieth Century**Credits 3.00 PeopleSoft Course ID 012739 Grading Basis GRD**

This course will provide students with the tools they need to be skilled visual readers as well as to link national and international representations of Latin America to their appropriate historical, social, cultural and political contexts.

HIST 438. Workshop in Public and Local History**Credits 3.00 PeopleSoft Course ID 011081 Grading Basis GRD**

Selected historical topics relating to the Shenandoah Valley and surrounding region are studied in depth. Students will undertake primary research and collaborate on final project. See MyMadison for current classes.

Prerequisite(s): HIST 225.

HIST 439. Selected Topics in American History**Credits 3.00 PeopleSoft Course ID 000070 Grading Basis GRD**

Selected topics are studied in depth. See MyMadison for current topic. Course may be repeated for credit when content changes.

HIST 440. The History Museum

Cross listed with: HIST 540

Credits 3.00 PeopleSoft Course ID 013275 Grading Basis GRD

An exploration of the history, evolution, and function of history museums. Readings and discussions cover the history and genealogy of the modern museum; exhibits and the influence of other forms of display such as world's fairs and department stores; ethics, mission, and administration; collections management and conservation; education and interpretation; emerging technologies; historical memory and controversy in museums; the role of the community; and museums on a global stage.

HIST 441. Oral History

Cross listed with: SCOM 441

Credits 3.00 PeopleSoft Course ID 011866 Grading Basis GRD

This course will explore the theory and practice of oral history. Through a series of readings, students will consider the many promises and challenges of the discipline, including issues related to memory, objectivity, ethics, the law, and technology. Students will also engage in an experiential learning exercise in which they collaborate to produce an oral history project.

HIST 442. Selected Topics in European History**Credits 3.00 PeopleSoft Course ID 014113 Grading Basis GRD**

Selected topics are studied in depth. See MyMadison for current topic. Course may be repeated for credit when content changes.

HIST 443. Modern American Technology and Culture**Credits 3.00 PeopleSoft Course ID 011898 Grading Basis GRD**

This seminar examines the sociotechnical history of twentieth century American. It employs several analytical frameworks to examine the complex relationship between social and technological change, casting particular attention on the mass production ethos, the social meanings of everyday household technologies, the nuclear age, the space age, countercultural technology and the high tech age.

HIST 444. Revolution and Social Change in Latin America**Credits 3.00 PeopleSoft Course ID 011936 Grading Basis GRD**

This seminar will explore why revolutions were a major feature of the Latin American landscape throughout the modern era and how they contributed to changes in society. In a typical semester the course will explore the lives of leaders such as Che and Emiliano Zapata and investigate the causes and consequences of revolutionary actions in Cuba, Mexico and Nicaragua.

HIST 445. In the Year 2000: America at the Turn of the Century**Credits 3.00 PeopleSoft Course ID 014584 Grading Basis GRD**

Students will focus on historical research and writing skills through the thematic study of American culture and politics in and around the year 2000. Students will read, listen, watch and analyze turn-of-the-century sources, engage in a series of practical exercises to explore a variety of historical methods and complete a semester-long research project.

HIST 447. South America**Credits 3.00 PeopleSoft Course ID 007967 Grading Basis GRD**

An examination of nineteenth and twentieth-century South America by emphasizing recent historiographies of the region. The class draws from social and cultural history to explore themes such as gender, race and ethnicity, nation-building, and historical memory.

HIST 448. Gender in Latin America and the Iberian World**Credits 3.00 PeopleSoft Course ID 012121 Grading Basis GRD**

This course is designed to introduce students to critical issues, theories and methods of gender history through the study of the history of Latin America and the broader Iberian world. Students will study select peoples and cultures of Latin America and the Iberian Peninsula exploring how they lived and understood gender and sexuality during the pre-colonial, colonial and/or modern eras.

HIST 449. Women and Fascism**Credits 3.00 PeopleSoft Course ID 012684 Grading Basis GRD**

This course offers a comparative understanding of fascism and women with a focus on Europe, including Nazi Germany, Fascist Italy and Francoist Spain. We will also discuss fascist movements and right-wing women in other European countries and in Latin America. The course will uncover the origins of fascism and the rise of the fascist party and the women's branch. **Prerequisite(s):**

HIST 451. Murderers, Arsonists and Thieves: Crime and Criminality in World History**Credits 3.00 PeopleSoft Course ID 014511 Grading Basis GRD**

Who defines crime? Who decides punishment? Who is punished? What does punishment look like? What happens to those who are punished after they have been punished? This course discusses these questions and more from a historical perspective, using examples from around the world. Students will learn soon enough that few forms of "crime" were that unique or particular, since economic, social, cultural and political trends produced similar patterns across national boundaries.

HIST 452. Parks and Recreation: History of National Parks**Credits 3.00 PeopleSoft Course ID 014488 Grading Basis GRD**

What are national parks? Why were they formed? How were they formed? Were people living in areas that became national parks? What happened to them? Who visits these parks? This course discusses these questions and more from a historical perspective, turning to works on national parks from around the world. Students will explore how national parks are best understood as "transnational parks," established through processes of learning, support, exchange and even pressure that transcended national boundaries.

HIST 453. Patterns of Global History**Credits 3.00 PeopleSoft Course ID 011037 Grading Basis GRD**

This course introduces students to the literature, concepts, themes and methodology of global history, a subfield of history that seeks to compare experiences across regional, area, cultural and temporal boundaries, to look at cross-cultural interactions and to examine large-scale patterns that have shaped history on a global scale.

HIST 454. Innocent Babies and Gray Heads: Ideas about Age in American History**Credits 3.00 PeopleSoft Course ID 014512 Grading Basis GRD**

This course will consider the influence of ideas about chronological age and the way these expectations have shaped life and public policy throughout American history. Come discover how American ideas about childhood, adulthood and old age have changed over four centuries. The course will investigate the wide variety of ideas about what chronological age tells us about who people are and what they are capable of. Boy kings, child brides, protected and idealized pastoral childhoods — all have been possible and promoted at times in American life. So, too, have both respect for old age and revulsion at the old existed. The course will consider how society decided how old is old enough to drink and how old is old enough to be drafted. This course will examine questions such as: What makes an adult anyway? Why were teenagers once considered adults? Why is 65 now retirement age?

HIST 458. Modern European Intellectual History**Credits 3.00 PeopleSoft Course ID 012457 Grading Basis GRD**

This upper-level seminar considers important thinkers and major trends in philosophical, social, and aesthetic thought in nineteenth- and twentieth-century Europe. Instead of merely surveying a series of ideas and thinkers, the course will trace the development of ideas across times and cultures by undertaking careful readings of key texts. **Prerequisite(s):**

HIST 459. Gender and Popular Culture**Credits 3.00 PeopleSoft Course ID 014513 Grading Basis GRD**

This course evaluates the history of U.S. popular culture as a force shaping and reflecting gender norms. It will analyze creators' and consumers' use of popular culture to promote stereotypes and to challenge them, with attention to ways that messages about gender, race, class, religion, sexuality and age intertwined. Students' original research will focus on the creation and reception of media including magazines, film and television.

HIST 461. Marxism**Credits 3.00 PeopleSoft Course ID 010537 Grading Basis GRD**

A study of the most significant ideas concerning politics, society, economics and philosophy which shaped Communism and Marxist varieties of Socialism.

HIST 462. Human Trafficking in African History**Credits 3.00 PeopleSoft Course ID 014514 Grading Basis GRD**

This seminar examines key themes in the history of human trafficking in the entire sweep of African history: the trans-Saharan slave trade, the Indian Ocean slave trade, the Atlantic slave trade, systems of African slavery and slave trade, and religions and slave trade. Students will recognize that the history of human trafficking as a significant global economic factor defies racial boundaries, connecting water bodies and continents, and develop familiarity with competing historiographical interpretations, debates and theories. Students will have opportunities to appreciate the historical roles of human trafficking in transforming societies, cultures, politics, religions, and people's perceptions and worldviews.

HIST 463. Pandemics and Epidemics in African History**Credits 3.00 PeopleSoft Course ID 014613 Grading Basis GRD**

This course explores the histories of epidemics and pandemics over the entire sweep of African history using a continent-wide perspective from the earliest recorded pestilence to the rise and expansion of successive Ebola epidemics. The course offers students the opportunity to understand how human interaction with the African environment — one of the major themes in African history — affected pandemics unfolding and how pandemics shaped

African demography and settlement patterns, economies, societies, cultures and politics.

HIST 467. The Roman Republic

Credits 3.00 PeopleSoft Course ID 012578 Grading Basis GRD

History 467 covers the political, military, social, economic and intellectual history of the Roman Republic from the traditional date of its foundation to Octavian's victory over M. Antonius and the establishment of the Empire. The course is a mixture of lectures and discussions of primary sources. Students will read selections from important authors such as Livy, Sallust, Caesar and Cicero in addition to scholarly monographs.

HIST 468. The Roman Empire

Credits 3.00 PeopleSoft Course ID 012579 Grading Basis GRD

History 468 covers the political, military, social, economic and intellectual history of the Roman Empire from its establishment ca 30 BC to the final division of the Empire into eastern and western halves in AD 395 at the death of Theodosius I. The course is a mixture of lectures and discussions of primary sources. Students will read selections from important authors such as Tacitus, Pliny the Younger, Cassius Dio and Ammianus Marcellinus in addition to scholarly monographs.

HIST 469. A History of International Development in the Twentieth Century

Credits 3.00 PeopleSoft Course ID 012907 Grading Basis GRD

This seminar considers major trends in the history of international development since World War II, focusing on American development theories, institutions, and programs but also considering case studies of aid programs worldwide. The course will trace the history of international development by undertaking careful readings and discussions of primary and secondary texts from a variety of disciplines, including history, economics, sociology, anthropology, and political science.

HIST 470. Modern Africa

Credits 3.00 PeopleSoft Course ID 004756 Grading Basis GRD

A historical analysis of the major themes in modern African history since the colonial era.

HIST 471. Commemoration and Controversy: Public Art in America

Cross listed with: ARTH 471

Credits 3.00 PeopleSoft Course ID 012439 Grading Basis GRD

This course examines the socio-historical, political, cultural, and philosophical dimensions of public art in American society, from the Early Republic to the present day. Topics may include: the nature of public art, its uses and functions, as well as civic and official attitudes towards art in the public sphere. Issues of censorship, propaganda, and the "culture wars" of the 1980s and 90s will be highlighted.

HIST 472. Military, Militarism and Warfare in African History

Credits 3.00 PeopleSoft Course ID 014515 Grading Basis GRD

This seminar course examines the historical role of the military, militarism and warfare in shaping African politics, economies, states, societies and cultures. The course will be organized thematically recognizing significant turning points in the history of Africa. Key themes of scholarly debate about the role of the military, militarism and warfare in the history of Africa, emphasizing developments since the beginning of the nineteenth century, will inform class discussions and assignments.

HIST 473. Early Modern Islamic Empires

Credits 3.00 PeopleSoft Course ID 003444 Grading Basis GRD

This seminar surveys and compares Islamic imperial formations from the 14th Century through World War I, focusing on the Ottoman, Safavid, and Mughal empires that flourished in the global age of early modernity.

HIST 474. Stalinism: Approaches, Experiences and Legacies

Credits 3.00 PeopleSoft Course ID 013276 Grading Basis GRD

This course will examine the lived experience of Stalinism from a variety of perspectives. Its goals are to question the applicability of the concept of totalitarianism to Stalin's Soviet Union and to explore the ways that different approaches to the study of history (political, social, cultural) have shaped our understanding of Soviet socialism under Stalin.

HIST 475. Modern Russia

Credits 3.00 PeopleSoft Course ID 003259 Grading Basis GRD

A study of Russia from the 1917 Revolution to the present. Readings and discussion will emphasize significant political, economic, social and cultural developments. **Prerequisite(s):**

HIST 476. Revolutionary Russia

Credits 3.00 PeopleSoft Course ID 014517 Grading Basis GRD

This course examines the causes, key events and consequences of the Russian revolutionary movement that culminated in the overthrow of the autocracy and establishment of the world's first socialist state in 1917. It explores both Western and Soviet historians' interpretations of the revolution and compares revolutionary experiences across classes, genders and nationalities in different parts of the Russian empire.

HIST 478. Eastern Europe

Credits 3.00 PeopleSoft Course ID 001129 Grading Basis GRD

A study of the lands between Germany and Russia, from the Baltic to the Balkans. Emphasis is on the Hapsburg Empire and its successor states, the origins of the World Wars, the post-World War II communist governments, and the cultural and intellectual contributions of the Eastern European people.

Prerequisite(s):

HIST 479. Global Environmental History: Mountains, Rivers and Animals in Asia and Africa

Credits 3.00 PeopleSoft Course ID 014516 Grading Basis GRD

Environmental history cultivates critical thinking beyond the confines of single-nation states and their respective geographies and chronologies to consider longer stretches of time and wider territorial scales of analysis. This course is organized around the study of the Himalayas, Hindu Kush and other mountain ranges including the Zagros, Taurus and Atlas where forests and forest products are the primary foci. In addition to Nile and Indus river histories, the course also considers the history of water more generally from the perspective of ancient hydraulic technologies in Mesopotamia to the geopolitics of mega-dams along the Mekong River. The course will address animal histories and cultures, primarily those associated with camels, horses and elephants while paying lesser attention to donkeys, mules, goats, sheep, dogs and yak. The general concern throughout will be human interaction with the natural world.

HIST 482. French History Seminar

Credits 3.00 PeopleSoft Course ID 012683 Grading Basis GRD

Broad introduction to a particular aspect of early modern, revolutionary or modern French history that is characterized by extensive historical debate. See instructor for thematic focus. Students develop knowledge of historical content and of the historiography/methodological approaches, conduct independent research and present findings in writing and in formal research colloquia. Students may repeat seminar for credit if topics differ. **Prerequisite(s):**

HIST 485. Imperial Science and Colonial Knowledge in the Middle East and South Asia

Credits 3.00 PeopleSoft Course ID 002247 Grading Basis GRD

This course examines modern colonialism and imperialism, particularly their cultural, intellectual and scientific dimensions. Thematic foci include systems of

imperial representation including Orientalism, and linguistic, cartographic, archaeological, urban, rural, and social scientific transformations under colonial regimes of knowledge and power. Colonial and imperial relationships in nineteenth-century British India and Egypt, twentieth-century Palestine and Israel, and the twenty first-century US and Afghanistan will be examined.

HIST 486. Europe Since 1914

Credits 3.00 PeopleSoft Course ID 009064 Grading Basis GRD

An interpretive study of European history from World War I to the post-Cold War era, with special emphasis on the revolutions of 1917-19, the rise of totalitarianism, the origins of the Second World War, the Cold War and the continuing crisis of values. **Prerequisite(s):**

HIST 487. World War II

Credits 3.00 PeopleSoft Course ID 010591 Grading Basis GRD

An examination of the origins, conduct and immediate aftermath of World War II in Europe and Asia. Attention is given to Japan's Pacific War, Hitler's war in Europe and the ultimate victory of the allies. The major military campaigns are discussed as are collaboration, resistance, and the War Crimes Trials.

Prerequisite(s):

HIST 488. The Holocaust in Global Context

Credits 3.00 PeopleSoft Course ID 011427 Grading Basis GRD

Introduces students to the most significant accomplishments and debates of recent Holocaust scholarship, emphasizing how historical memory of the Holocaust has been created and has evolved over time. Analyzes the historical causes and development of the Holocaust, as well as its cultural, political, and scholarly resonance in the post-1945 world. **Prerequisite(s):**

HIST 489. Selected Topics in World History

Credits 3.00 PeopleSoft Course ID 007872 Grading Basis GRD

Selected topics are studied in depth. Course may be repeated when content changes. Only courses with significant content outside of Europe will count toward the world history requirement. See MyMadison and the history department website for information on current classes. **Prerequisite(s):**

HIST 492. History From Things: Material Culture

Cross listed with: ANTH 492, ARTH 492

Credits 3.00 PeopleSoft Course ID 011024 Grading Basis GRD

This course explores the multidisciplinary "field" of material culture studies and the ways of looking at and learning from objects, things, or "stuff," ranging from furniture and teapots to houses and farmyards. It examines how scholars from a variety of disciplines have used material culture in their work. Readings draw from multiple sources, approaches and methodologies, reflecting the interdisciplinarity of the field.

HIST 493. Historic Preservation

Cross listed with: ARTH 493

Credits 3.00 PeopleSoft Course ID 008457 Grading Basis GRD

An introduction to the philosophy and techniques of historic preservation, guidelines for restoration, state and National Register forms and procedures, historic architecture, structural analysis, restoration techniques as well as the business aspects of historic preservation projects. Field trips are a major component of the course.

HIST 496. Research Thesis

Cross listed with: ANTH 496

Credits 3.00 PeopleSoft Course ID 011612 Grading Basis GRD

Students will gather, analyze and interpret archaeological/historical data over two semesters. Students will work on a project that demonstrates theory, research design, data gathering and analysis, culminating in a written thesis. The course meets the capstone requirement for the historical archaeology

minor, but is also available to students in history and anthropology. **Prerequisite(s): Junior or Senior Standing Only.**

HIST 499. Honors

Credits 3.00 PeopleSoft Course ID 006214 Grading Basis GRD

Year course. **Prerequisite(s):**

Honors

HON 100. Honors First Year Seminar

Credits 1.00 PeopleSoft Course ID 013523 Grading Basis CNC

As an introductory experience in the Honors College, students will be oriented to Honors activities and goals, high impact university learning practices, seminar requirements and areas of emphasis sequences, and leadership, service, and research opportunities. Students will examine their personal and educational goals and participate in ethical reflection that expresses itself in scholar-citizenship and community engagement.

HON 101. Honors Orientation Seminar

Credits 1.00 PeopleSoft Course ID 014354 Grading Basis CNC

This course is an introductory experience in the Honors College for current JMU students entering as new Honors Scholars in the second semester of their first year and beyond. Newly admitted Honors Scholars will be oriented to Honors activities and goals; high impact university learning practices; curricular requirements; and leadership, service and research opportunities. Students will examine their personal and educational goals and participate in ethical reflection that expresses itself in scholar-citizenship and community engagement.

HON 200. Special Topics in Honors

Credits 1.00 - 6.00 PeopleSoft Course ID 012422 Grading Basis GRD

Unique interdisciplinary courses designed specifically for the Honors College, these courses explore a range of complex topics that deal with contemporary issues in society, multicultural and comparative studies, and advanced applications in business and the natural and social sciences. Seminars are designed to be flexible small classes that may reflect unique, sometimes experimental, styles of teaching. May be repeated when topic changes. **Prerequisite(s): Enrollment in the Honors College or permission of the Honors College dean.**

HON 300. Advanced Special Topics in Honors

Credits 1.00 - 6.00 PeopleSoft Course ID 006150 Grading Basis GRD

Unique interdisciplinary courses designed specifically for the Honors College, these courses explore a range of complex topics that deal with contemporary issues in society, multicultural and comparative studies, and advanced applications in business and the natural and social sciences. Seminars are designed to be flexible small classes that may reflect unique, sometimes experimental, styles of teaching. HON 300 seminars are not recommended for first year students. May be repeated when topic changes. **Prerequisite(s): Enrollment in the Honors College or permission of the Honors College dean.**

HON 321. Leadership I

Credits 3.00 PeopleSoft Course ID 013539 Grading Basis GRD

This Honors Seminar is the first course within the Leadership Area of Emphasis. Students will be introduced to the meaning, study and practice of leadership through the examination and evaluation of leadership styles and behavior. Students will analyze the way in which leadership principles and practices have been and can be applied to their lives. Through this study, students will develop their own personal leadership potential.

HON 322. Leadership II

Credits 3.00 PeopleSoft Course ID 013540 Grading Basis GRD

This honors seminar offers a variety of individualized and/or small group experiential learning opportunities in association with the leadership area of emphasis. **Prerequisite(s):** *Enrollment in the Honors College or permission of the Honors College dean.*

HON 323. Leadership III

Credits 1.00 - 3.00 PeopleSoft Course ID 013541 Grading Basis CNC

This practicum course offers an intense independent study opportunity for students to work one-on-one or in small groups with faculty mentors on a project of their design. The specifics of these offerings will be designed by faculty mentors and the area of emphasis honors student(s). Objectives, goals and deliverables should be an extension and follow-up to activities associated with an experiential area of emphasis course. Repeatable for a maximum of three credits. **Prerequisite(s):** *Enrollment in the Honors College or permission from the Honors College Dean.*

HON 331. Global Studies I

Credits 3.00 PeopleSoft Course ID 013542 Grading Basis GRD

This Honors Seminar is the first course within the Global Studies Area of Emphasis. We will examine how people study and perceive similarities, differences and interdependencies among human societies through the exploration of social sciences, arts, humanities, health, education, environmental and developmental studies. Course components will promote global citizenship through discussion, the introduction of new concepts and critical thinking related to current issues and case studies.

HON 332. Global Studies II

Credits 3.00 PeopleSoft Course ID 013543 Grading Basis GRD

This honors seminar offers a variety of individualized and/or small group experiential learning opportunities in association with the global studies area of emphasis. **Prerequisite(s):** *Enrollment in the Honors College or permission of the Honors College dean.*

HON 333. Global Studies III

Credits 1.00 - 3.00 PeopleSoft Course ID 013544 Grading Basis CNC

This practicum course offers an intense independent study opportunity for students to work one-on-one or in small groups with faculty mentors on a project of their design. The specifics of these offerings will be designed by faculty mentors and the area of emphasis honors student(s). Objectives, goals and deliverables should be an extension and follow-up to activities associated with an experiential area of emphasis course. Repeatable for a maximum of three credits. **Prerequisite(s):** *Enrollment in the Honors College or permission from the Honors College Dean.*

HON 341. Scientific Research I

Credits 3.00 PeopleSoft Course ID 013545 Grading Basis GRD

This Honors Seminar is the first in the Research Area of Emphasis series. The course is designed as an introduction to the nature of scientific inquiry and what it means to be a research scientist and effective communicator. Course objectives will be met through the collective investigation of a "big" problem and the professional communication of the resulting findings. In doing so, students will gain scientific literacy skills to support future research efforts.

HON 342. Scientific Research II

Credits 3.00 PeopleSoft Course ID 013546 Grading Basis GRD

This honors seminar offers a variety of individualized and/or small group experiential learning opportunities in association with the research area of emphasis. **Prerequisite(s):** *Enrollment in the Honors College or permission of the Honors College dean.*

HON 343. Scientific Research III

Credits 1.00 - 3.00 PeopleSoft Course ID 013547 Grading Basis CNC

Practicum courses offer an intense independent study opportunity for students to work one-on-one, or in small groups, with faculty mentors on a project of their design. The specifics of these offerings will be designed by faculty mentors and the area of emphasis honors student(s). Objectives, goals and deliverables should be an extension and follow-up to activities associated with an experiential area of emphasis course. Repeatable for a maximum of three credits. **Prerequisite(s):** *Enrollment in the Honors College or permission from the Honors College Dean.*

HON 351. Service I

Credits 3.00 PeopleSoft Course ID 013548 Grading Basis GRD

This Honors Seminar is the first course within the Service Area of Emphasis. Engaged citizens make differences in the quality of life in local, national and global communities. Upon studying a wide spectrum of contemporary issues, engaged citizens take action. This seminar provides opportunities for students to combine their intellectual pursuits with civic engagement and discourse, thereby empowering them to become engaged participants in tomorrow's global society.

HON 352. Service II

Credits 3.00 PeopleSoft Course ID 013549 Grading Basis GRD

This honors seminar offers a variety of individualized and/or small group experiential learning opportunities in association with the service area of emphasis. **Prerequisite(s):** *Enrollment in the Honors College or permission of the Honors College dean.*

HON 353. Service III

Credits 1.00 - 3.00 PeopleSoft Course ID 013550 Grading Basis CNC

This practicum course offers an intense independent study opportunity for students to work one-on-one, or in small groups, with faculty mentors on a project of their design. The specifics of these offerings will be designed by faculty mentors and the area of emphasis honors student(s). Objectives, goals and deliverables should be an extension and follow-up to activities associated with an experiential area of emphasis course. Repeatable for a maximum of three credits. **Prerequisite(s):** *Enrollment in the Honors College or permission from the Honors College Dean.*

HON 361. Creativity I

Credits 3.00 PeopleSoft Course ID 013551 Grading Basis GRD

The course explores basic concepts of creativity across the disciplines and cultures. Course content includes the study and analysis of creative expression, the application of theories and conceptual frameworks, and the various modes of creative cognition.

HON 362. Creativity II

Credits 1.00 - 3.00 PeopleSoft Course ID 013552 Grading Basis GRD

This honors seminar offers a variety of individualized and/or small group experiential learning opportunities in association with the creativity area of emphasis. **Prerequisite(s):** *Enrollment in the Honors College or permission of the Honors College dean.*

HON 363. Creativity III

Credits 1.00 - 3.00 PeopleSoft Course ID 013553 Grading Basis CNC

This practicum course offers an intense independent study opportunity for students to work one-on-one or in small groups with faculty mentors on a project of their design. The specifics of these offerings will be designed by faculty mentors and the area of emphasis honors student(s). Objectives, goals and deliverables should be an extension and follow-up to activities associated with an experiential area of emphasis course. Repeatable for a maximum of three credits. **Prerequisite(s):** *Enrollment in the Honors College or permission from the Honors College Dean.*

HON 401. Introduction to Honors ePortfolio

Credits 1.00-2.00 PeopleSoft Course ID 014355 Grading Basis GRD

Students choosing the Honors Portfolio option must work with a faculty adviser to create a portfolio showcasing their substantial scholarship or creative work and demonstrating expert skill, knowledge, imagination and/or craftsmanship in their chosen major or minor. The HON 401 course is designed to build coherence around three main principles: making reflection an integral part of learning (metacognition), making connections across courses and programs (integrative learning), and highlighting the social component of learning (social pedagogies).

HON 402. Honors ePortfolio

Credits 1.00-2.00 PeopleSoft Course ID 014356 Grading Basis GRD

Students choosing the Honors Portfolio option must work with a faculty adviser to create a portfolio showcasing their substantial scholarship or creative work and demonstrating expert skill, knowledge, imagination and/or craftsmanship in their chosen major or minor. The HON 402 course provides students the opportunity to concentrate on ePortfolio completion and synthesis. **Prerequisite(s):** HON 401.

HON 450. Honors Independent Study

Credits 1.00 - 6.00 PeopleSoft Course ID 013762 Grading Basis GRD

This course provides an opportunity to support projects designed for individualized learning experiences for honors students. **Prerequisite(s):** *Permission of the Honors College dean.*

HON 496. Internship

Credits 1.00 - 6.00 PeopleSoft Course ID 014461 Grading Basis GRD

An experiential learning opportunity connected to the student's professional long-term goals. May include directed readings, journaling and completion of a final reflective paper. May be repeated for a total of nine credits. **Prerequisite(s):** *Permission of the Honors College dean.*

HON 499A, B, C. Honors Senior Project

Credits 1.00, 3.00 or 2.00 PeopleSoft Course ID 013285 Grading Basis GRD

This is a three semester course, offered as parts A, B and C for one, three and two credits per semester, respectively. Enrollment is restricted to those honors students whose senior projects are not discipline specific. This could include certain collaborative projects or experientially-based projects. **Prerequisite(s):** *Permission of the Honors Program Dean.*

HON 499B. Honors Senior Project

Credits 3.00 PeopleSoft Course ID 013286 Grading Basis GRD

This is a three semester course, offered as parts A, B, and C for one, three and two credits per semester, respectively. Enrollment is restricted to those honors students whose senior projects are not discipline specific. This could include certain collaborative projects or experimentally based projects. **Prerequisite(s):** *Permission of the Honors College Dean.*

HON 499C. Honors Senior Project

Credits 2.00 PeopleSoft Course ID 013287 Grading Basis GRD

This is a three semester course, offered as parts A, B, and C for one, three and two credits per semester, respectively. Enrollment is restricted to those honors students whose senior projects are not discipline specific. This could include certain collaborative projects or experimentally based projects. **Prerequisite(s):** *Permission of the Honors College Dean.*

Hospitality Management

HM 101. Lecture Series in Hospitality Leadership and Innovation

Credits 1.00 PeopleSoft Course ID 014494 Grading Basis CNC

This lecture series class is geared toward an open forum for students to interact and discuss issues related to hospitality leadership and innovation. The

course consists of one hour of lecture or discussion per week, with opportunities to interact with professionals outside of class.

HM 111. Overview of Hospitality and Tourism Management

Credits 3.00 PeopleSoft Course ID 001451 Grading Basis GRD

This course exposes students to the areas of lodging, food and beverage, tourism and entertainment management, special events and meeting planning, and club and resort management. Emphasis is on hospitality industry scope, organization and economic impact; includes familiarization with industry terminology and individual and business contributors to the field of hospitality and tourism management. **Prerequisite(s):** *Hospitality Management major or permission of program director.*

HM 112. Foundations in Leadership of Hospitality Management

Credits 3.00 PeopleSoft Course ID 014495 Grading Basis GRD

This course provides an introduction to leadership in Hospitality Management and the Mega Industry. The primary focus will be leadership theory and skill application with a focus on personal awareness. **Prerequisite(s):** *Hospitality Management majors or permission of the program director.*

HM 201. Foundations of Hospitality, Sport and Recreation Management

Credits 3.00 PeopleSoft Course ID 012529 Grading Basis GRD

An introduction to the basis for the professions that make up the School of Hospitality, Sport and Recreation Management. A focus on these professions in governmental, voluntary, private and commercial settings is incorporated. Both the economical significance and the professional preparation for success in the industry is both introduced and practiced.

HM 203. Foundations of Ethics and Law in Hospitality, Sport and Recreation Management

Credits 3.00 PeopleSoft Course ID 012540 Grading Basis GRD

An introduction to ethics and law within the sport, hospitality and recreation industry. The ethical portion introduces students to select theories of ethics, ethical issues and an ethical decision-making model. The legal portion introduces students to basic legal terminology and concepts while concentrating on negligence and employment issues.

HM 222. Hospitality Professional Work Experience

Credits 3.00 PeopleSoft Course ID 012532 Grading Basis GRD

This applied hospitality course consists of experiential exercises followed by class discussion and actual work experience as an employee within the hospitality field. Role-playing and cases are used as learning activities where the instructor acts as a facilitator to learning. Debriefing is used extensively as a way of creating essential theory. Students must successfully complete ServSafe Food Protection Manager Certification and Training for Intervention Procedures (TIPS). Students complete approximately 100 hours of hospitality-related practical experience. **Prerequisite(s):** *Hospitality Management majors or permission of the program director.*

HM 244. Disney Internship

Credits 3.00 - 6.00 PeopleSoft Course ID 014496 Grading Basis CNC

The paid, semester-long internship program allows students to live just outside Walt Disney World Resort in Florida or the Disneyland Resort in California while earning college credit at Disney parks and resorts through a combination of on-the-job experience, shadowing and seminars. **Prerequisite(s):** *Permission of the hospitality management program director.*

HM 251. Cost Control and Budgeting

Credits 3.00 PeopleSoft Course ID 010560 Grading Basis GRD

Introduction to cost control, budgeting and financial analysis as it relates to the hospitality industry. Students work as a team to create a detailed business plan

using MS Excel. **Prerequisite(s):** *Hospitality management majors or permission of program director.*

HM 252. Culinary Arts and Menu Management

Credits 3.00 PeopleSoft Course ID 013695 Grading Basis GRD

This course covers application of basic food preparation and menu development. The focus is on preparing students to understand gastronomy and communicate with culinary professionals. This course includes the development of effective menus, plate presentation, preparation methods, flavor development and food service trends. Lab fee applies. Uniform required.

Prerequisite(s): *HM 222 or permission of program director.*

HM 298. Special Studies in Hospitality Management

Credits 3.00 PeopleSoft Course ID 010572 Grading Basis GRD

A special studies course designed to explore areas of current topical concern in the lodging, food and beverage, travel and tourism, and entertainment industries. Course content will vary. **Prerequisite(s):** *HM major or permission of director.*

HM 310. Practical Work Experience

Credits 0.00 PeopleSoft Course ID 010568 Grading Basis CNC

Required 600 hours of approved hospitality and tourism work experience.

Credit/no credit only. All work sites must be approved. **Prerequisite(s):**

Minimum of 45 credit hours complete, HM 201, HM 203, HM 111 and HM

222. Corequisite(s): HM 252.

HM 316. Country Club Management

Credits 3.00 PeopleSoft Course ID 013696 Grading Basis GRD

This course is an application of business concepts to the private equity club and full-service resort industry. Industry cases are used to facilitate discussion of similarities and differences among private equity clubs, full service resorts and other hospitality business in the areas of culture, asset management and operations. **Prerequisite(s):** *Junior standing.*

HM 321. Introduction to Event Management

Credits 3.00 PeopleSoft Course ID 013697 Grading Basis GRD

This course is designed to explore conferences, conventions, expositions, meetings and special events as they relate to the responsibilities of a planner, selection criteria for host venues, legal and ethical issues, negotiating process, program design, budgeting, contracts, marketing, logistics and evaluation. Practical hands-on experience through projects may occur. **Prerequisite(s):** *HM 251.*

HM 322. Lodging, Clubs and Resort Operations and Technology

Credits 3.00 PeopleSoft Course ID 009830 Grading Basis GRD

This course offers an in-depth look at full-service hotels, clubs and resorts through the eyes of a general manager. The course will focus on operations, engineering, housekeeping, uniformed services, front office, reservations and revenue management. Different hospitality technology platforms and software programs will be used to expose students to hospitality technology. **Prerequisite(s):** *HM 251.*

HM 333. Internship in Hospitality Management

Credits 3.00 PeopleSoft Course ID 014497 Grading Basis CNC

Students will complete 200 hours of approved hospitality work experience. CR/NC only. All worksites must be pre-approved. In addition, students must validate 600 hours of professional work experience in the services industry as a prerequisite to this course. **Prerequisite(s):** *HM 222 and HM 251 and permission of instructor.*

HM 361. Italian Culture and Wine

Credits 3.00 PeopleSoft Course ID 012533 Grading Basis GRD

An introduction to the fundamentals of wine making, wine tasting and glossary of terms provide a framework for visual, olfactory and gustative analysis. The historical value of wine, together with its cultural, economic and social meaning in Italy, are explored. Course taught in Florence, Italy. Lab fee applies.

Prerequisite(s): *Student must be enrolled in JMU in Florence Program.*

HM 362. Italian Gastronomy

Credits 3.00 PeopleSoft Course ID 012534 Grading Basis GRD

This course is designed to teach students the applied approach to match wine and food from different parts of the world using flavors, textures and components present in food and wine in complementing strategies. Emphasis will be placed on menu planning, cooking methods and tasting wines with food in a formal dining room. Course offered in Florence, Italy. Lab fee applies.

Prerequisite(s): *Student must be enrolled in JMU in Florence Program.*

HM 371. Profit Optimization and Revenue Management

Credits 3.00 PeopleSoft Course ID 011408 Grading Basis GRD

In this course, students will apply and analyze data to effectively manage rates and capacity applied in many service industries, including hospitality. The focus of this course is to help students learn how to apply revenue management principles to maximize profitability in lodging, clubs, and the food and beverage sectors. **Prerequisite(s):**

HM 321 and HM 322.

HM 411. Hospitality Law

Credits 3.00 PeopleSoft Course ID 010573 Grading Basis GRD

The course focuses on the application of the law to the hospitality industry including rights and obligations of guests and lodging, food service, club, event management and association operators. The identification of potential legal problems and formulation of preventive measures to limit/prevent liability are emphasized. **Prerequisite(s):** *HM 111 and junior standing.*

HM 414. Beverage Management and Marketing

Credits 3.00 PeopleSoft Course ID 001599 Grading Basis GRD

The course is designed to enhance knowledge in the identification and evaluation of beverages typically served in hospitality establishments. Special attention is given to alcoholic and non-alcoholic beverages with regard to price/quality relationships; channels of distribution and marketing; trends and current issues faced by the industry; and service ethics. **Prerequisite(s):** *Must be 21 years of age or older and declared HM major, HM 444 or permission of director.*

HM 417. Advanced Event Management

Credits 3.00 PeopleSoft Course ID 013733 Grading Basis GRD

This course examines event planning and management within a project management framework. The course is designed to provide hands-on experience in event planning. Students will work to plan and execute an event from start to finish with instructor oversight. Students will demonstrate, by executing an event, the core competencies required of a successful event manager. **Prerequisite(s):** *HM 321, HM 322, HM 371 and permission of instructor or director.*

HM 419. Napa & Sonoma Wine and Culture

Credits 3.00 PeopleSoft Course ID 012536 Grading Basis GRD

Napa and Sonoma are the premier wine growing regions in the United States. The wines influence wines across the US and around the world. The ability to impressively learn about the wine, food, and culture that influence the region can only be fully accomplished by visiting. Students are able to visit wineries and speak with owners, visit growers and speak with the farmers, visit nurseries and discuss varietals. **Prerequisite(s):** *HM Major, 21 years old the first day of class and permission of the director.*

HM 421. Hospitality Ethics

Credits 3.00 PeopleSoft Course ID 012744 Grading Basis GRD

Ethical issues and actions that have occurred, or are currently occurring, in the hospitality industry are examined from multiple perspectives. Examining recent scandals, real-world scenarios, news stories and common ethical dilemmas will enable a student to recognize an ethical dilemma, understand the components of the dilemma and make an ethical decision. **Prerequisite(s):**

HM 111 and junior standing.

HM 422. Hospitality Human Resources Management

Credits 3.00 PeopleSoft Course ID 013248 Grading Basis GRD

This course examines the identification and exploration of the information needs of the hospitality manager in making policy and personnel decisions. Different philosophies and processes for locating, attracting, hiring and training a qualified staff are examined. Emphasis is placed on the work environment within the service industry. Employment law will be emphasized as a part of the course. **Prerequisite(s):** *HM 321, HM 322 and HM 333; or permission of the director.*

HM 442. Hospitality Seminar

Credits 3.00 PeopleSoft Course ID 010562 Grading Basis GRD

This senior capstone course is designed to assist in transitioning from being a university student to holding a leadership role within the hospitality industry. The interactive course draws upon the umbrella curricular goals of the hospitality management program in communication, ethics, finance and leadership. Senior assessment may also occur. **Prerequisite(s):** *HM 333.*

HM 444. Supervisory Hospitality Internship

Credits 3.00 PeopleSoft Course ID 012537 Grading Basis GRD

Students will complete 200 hours of approved hospitality supervisory experience. All work sites must be pre-approved. **Prerequisite(s):** *Senior standing and HM 333.*

HM 490. Special Studies in Hospitality and Tourism Management

Credits 3.00 PeopleSoft Course ID 013365 Grading Basis GRD

Designed to give capable students in hospitality and tourism management an opportunity to complete independent study under faculty supervision.

Prerequisite(s): *Permission of director.*

HM 498. Special Topics in Hospitality and Tourism Management

Credits 3.00 PeopleSoft Course ID 001444 Grading Basis GRD

This course is designed to allow explorations of areas of current topical concern, or to exploit special situations. Course content will vary. For current course content, consult the adviser. **Prerequisite(s):** *Permission of director.*

HM 499. Honors

Credits 1.00 - 6.00 PeopleSoft Course ID 013706 Grading Basis GRD

Year course. See catalog section "Graduation with Honors." **Prerequisite(s):** *Permission of the instructor or director.*

Human Resource Development

HRD 100. Human Resource Development Leadership Lab

Credits 2.00 PeopleSoft Course ID 011861 Grading Basis GRD

Hands-on practicum of leadership strategies and techniques designed to give each student a better appreciation for the dynamics of leadership in intimate, physically challenging and stressful environments, both indoors and out. Students operate in teams which are formed and reorganized on a continuous basis, surrounded by peers at several levels of leadership experience and training. Collaborative learning is enhanced when students apply what they learn in class by describing relevant lessons learned through experiences outside the classroom. The focus of this course is to provide students with the opportunity to lead and follow in an observed setting and receive constant

feedback and mentoring on their demonstrated leadership skills. Students learn through leading as well as through a critical reflection, inquiry, dialogue and group interaction. Everyone is responsible for contributing to the learning process.

HRD 101. Introduction to Leadership

Credits 1.00 PeopleSoft Course ID 011862 Grading Basis GRD

An introduction to: various leadership styles and their effect on organizations; insight into the leaders' roles and responsibilities within the context of the organization; character- and values-based leadership; basic leadership actions; the importance of self improvement in the areas of time management, health and fitness, goal setting, academic accomplishment and communications; group dynamics, and the development of interpersonal skills. **Corequisite(s):** *HRD 100.*

HRD 123. Developing Multicultural Competency for Effective Facilitation

Credits 3.00 PeopleSoft Course ID 014068 Grading Basis GRD

This course will provide students with a deeper understanding of social identities, and they will gain the necessary skills to facilitate training, programs and dialogues focusing on areas of diversity, multiculturalism, inclusion and access. Students enrolled in this course will be prepared to become a diversity educator in the Diversity Education Empowerment Program sponsored by the Center for Multicultural Student Services at James Madison University.

HRD 201. Leadership Styles Theory and Application

Credits 2.00 PeopleSoft Course ID 011863 Grading Basis GRD

Explores the dimensions of creative and innovative leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the leadership framework (trait and behavior theories). Students practice aspects of personal motivation and team building in the context of planning, executing and assessing team exercises and participating in leadership skills labs. Focus is on continued development of the knowledge of leadership values and attributes through an understanding of institutional structures, duties and responsibilities of organizational/institutional leaders, and leadership in small organizations. Case studies provide tangible context for learning leadership skills, values, actions and attributes as they apply to a contemporary setting. **Prerequisite(s):** *HRD 100, HRD 101.*

HRD 240. Introduction to Human Resource Development

Credits 3.00 PeopleSoft Course ID 004187 Grading Basis GRD

An introduction to the role and scope of human resource development with particular emphasis on required competencies for HRD professionals. Critical moral and ethical issues are introduced.

HRD 245. Leadership in Organizational Settings

Credits 3.00 PeopleSoft Course ID 008754 Grading Basis GRD

An examination of the principles of leadership and their application within organizational settings. Emphasis will be placed on the critical appraisal of the facets of leadership through the use of cases and readings.

HRD 380. Performance and Task Analysis in Human Resource Development

Credits 3.00 PeopleSoft Course ID 009098 Grading Basis GRD

Provides the basic skill level for students in the area of performance analysis and subsequent assessment. Particular emphasis is placed on actual analysis and assessment situations with application to program and curricular design.

Prerequisite(s): *Declared HRD minor or Adult Degree Program students and HRD 240, HRD 245 and LDT 370. Corequisite(s):* *LDT 370.*

HRD 400. Human Resource Development Internship

Credits 3.00 PeopleSoft Course ID 002875 Grading Basis GRD

A structured internship experience designed to provide students with the opportunity to contribute within an actual work setting the role and scope of

human resource development efforts. Minimum 400-hour experience approved by the program coordinator. The minor does not provide internships.

Prerequisite(s): *Adviser permission required.*

HRD 475. Seminar in Leadership

Credits 3.00 PeopleSoft Course ID 007733 Grading Basis GRD

Designed to provide senior-level students with the opportunity to face some of the dilemmas of leadership. Students will be encouraged to critically examine leaders and organizations to draw from real events the ambiguities of leadership. Course will involve extensive reading, case work and a range of guest speakers. **Prerequisite(s):** *HRD 245.*

HRD 480. Learning in Adulthood

Credits 3.00 PeopleSoft Course ID 005690 Grading Basis GRD

This course is a study of the learning processes of the adult learner with an emphasis on adaptations of the instructional process to accommodate the differences inherent in the adult learning environment. Practical applications to actual adult learning situations are included. **Prerequisite(s):** *Declared HRD minor or Adult Degree Program student; and LDT 370.*

HRD 485. Development of Materials and Programs

Credits 3.00 PeopleSoft Course ID 001900 Grading Basis GRD

This course is designed to provide students with the basic skills necessary to design and develop performance-based training programs and courses. Emphasis will be placed on the actual design and development of training materials while working with an actual client. **Prerequisite(s):** *Declared HRD minor or Adult Degree Program student; and LDT 370 and HRD 380.*

LTLE 470. Diversity and International Human Resource Development

Credits 3.00 PeopleSoft Course ID 011712 Grading Basis GRD

The course prepares students for meeting the challenges presented by globalization and workforce diversity in HRD. Topics include the impact of increasing globalization and diversity on HRD and the workplace, cross-cultural communications, conflict resolution in diversity settings, global diversity management, ethics, and cross-culture leadership competencies. It examines and explores theories and techniques for dealing with institutional 'isms' (e.g. multiculturalism, sexism, ageism). **Prerequisite(s):** *HRD 240 and HRD 245 must be human resource development minor.*

Humanitarian Affairs

HUMN 201. Introduction to Humanitarian Affairs

Credits 3.00 PeopleSoft Course ID 012335 Grading Basis GRD

A geographical overview of poverty, armed conflict, hunger, disease, and natural disasters and how they can lead to humanitarian crises. It includes a study of human rights along with a look at international efforts to address, and international organizations that deal with, humanitarian crises.

HUMN 301. Introduction to Natural Disasters Response

Cross listed with: *GEOG 301*

Credits 3.00 PeopleSoft Course ID 013143 Grading Basis GRD

This course is designed to give students an overview of the various types of natural disasters; a look at the world regions that are most vulnerable to each type of disaster; and, a preview of disaster planning, management, relief and response as related to natural disasters.

HUMN 302. Legal Issues in Humanitarian Affairs

Credits 3.00 PeopleSoft Course ID 013820

This course prepares students interested in humanitarian response with basic information on the legal issues of humanitarian law. It covers principles of domestic and international law relevant to the practice of humanitarian response, including international humanitarian law, the law of armed conflict,

international human rights law, international criminal law and other legal topics relevant to humanitarian affairs practitioners. **Corequisite(s):** *Junior status.*

HUMN 331. Human Rights in Theory and Practice

Cross listed with: *JUST 331, POSC 331*

Credits 3.00 PeopleSoft Course ID 011808 Grading Basis GRD

This course will explore the nature and value of human rights by investigating some major debates over their status and meaning, and by examining some of the ways people have tried to secure human rights in practice. **Prerequisite(s):** *Humanitarian Affairs minors only.*

HUMN 350. Special Topics in Humanitarian Affairs

Credits 1.00 - 3.00 PeopleSoft Course ID 013483 Grading Basis GRD

Focused, in-depth study of specific areas or subjects related to Humanitarian Affairs. Topics will provide background and skills important for humanitarian work. Can be repeated as course content changes. **Prerequisite(s):** *Permission of the minor coordinator.*

HUMN 360. GIS for Humanitarian Assistance

Cross listed with: *GEOG 360*

Credits 3.00 PeopleSoft Course ID 013144 Grading Basis GRD

In responding to humanitarian crises, governments and aid organizations must deploy aid workers, deliver essential services, set up temporary settlements, and distribute items such as water and food that are needed for survival. Spatial analysis and maps are critical to the success of these efforts. In this course, students learn the basics of Geographic Information Systems (GIS) for humanitarian assistance and learn how relief organizations use GIS in their work. **Prerequisite(s):** *GEOG 215.*

HUMN 490. Humanitarian Affairs Field Experience

Credits 3.00 PeopleSoft Course ID 013145 Grading Basis GRD

The HUMN 490 course offers students an opportunity to gain experience and practical skills, preferably in an "international setting," either in the U.S. or abroad, and to apply knowledge and skills acquired through the Humanitarian Affairs program. This course must be completed in a setting approved by the student's adviser and the humanitarian affairs minor committee. **Prerequisite(s):** *HUMN 201 and junior status.*

Humanities

HUM 200. Great Works [C2L]

Credits 3.00 PeopleSoft Course ID 007711 Grading Basis GRD

An intensive examination of great literary works that focus on key issues of knowledge and reality, meaning and purpose, ethics, and aesthetics. Discussion, analysis and intensive writing are required. Texts will vary by section and instructor. May be used for General Education credit.

HUM 200L. Great Works - London [C2L]

Credits 3.00 PeopleSoft Course ID 004483 Grading Basis GRD

An intensive examination of great literary works that focus on key issues of knowledge and reality, meaning and purpose, ethics, and aesthetics. Discussion, analysis and intensive writing are required. Texts will vary by section and instructor. May be used for General Education credit.

Prerequisite(s): *Studies Abroad-London*

HUM 250. Foundations of Western Culture [C2HQC]

Credits 3.00 PeopleSoft Course ID 008537 Grading Basis GRD

This course is a study of the roots of our Western tradition in Greek, Roman, Medieval or Renaissance culture. Students examine the interrelationships among history and literary works; the fine arts; philosophical and religious thought and intellectual contexts. Content will vary depending on section and instructor. May be used for General Education credit.

HUM 251. Modern Perspectives [C2HQC]

Credits 3.00 PeopleSoft Course ID 005377 Grading Basis GRD

An interdisciplinary study within the modern period of arts and humanities. Students will examine the interrelationships among history and the arts, philosophy, religion and the intellectual ideas of the time. Topics will vary by section. May be used for General Education credit.

HUM 251L. British Media and Society

Cross listed with: SCOM 360L, SMAD 360L, WRTC 360L

Credits 3.00 PeopleSoft Course ID 012295 Grading Basis GRD

Study the history, nature, and impact of mass media in the United Kingdom. Emphasis on the impact modern media has on society, and society has on media. Consideration of similarities and differences in mass media in the United States and Great Britain. Consideration of the relationship between mass media and the arts. Focus on 20th century mass media in London, one of the world's preeminent and most influential centers. **Prerequisite(s):** *Studies Abroad-London*

HUM 252. Global Cultures [C2HQC]**Credits 3.00 PeopleSoft Course ID 006708 Grading Basis GRD**

This course is an interdisciplinary study of cultures or regions commonly referred to as non-Western. Students examine diverse responses to enduring human questions at the intersection of local and global cultures. The course offers ways to critically engage comparative views on global cultures and in so doing broaden students' understanding of those cultures and their own. Sections may address themes that span multiple cultural spaces (such as sports or the environment) or focus on regions. Section topics vary by instructor. Only approved topics may count for General Education credit.

Inclusive Early Childhood Education

IECE 300. Issues and Trends in Inclusive Early Childhood Education**Credits 3.00 PeopleSoft Course ID 012489 Grading Basis GRD**

This course is designed to introduce students to the issues and trends in the education of all infants, toddlers and young children. It will provide the historical, philosophical, social and legal background for current practices in the field and will engage students in synthesizing and analyzing this information along with research as it pertains to professional practice. **Prerequisite(s):** *EXED 200, EDUC 200 and admission to teacher education pre-professional licensure program.* **Corequisite(s):** *IECE 301 and IECE 303.*

IECE 301. Initial Field Experience in Inclusive Early Childhood Education**Credits 1.00 PeopleSoft Course ID 012490 Grading Basis CNC**

This practicum supports IECE 300. Students will further their understanding of the issues and trends impacting young children and their families in our community and evaluate their own perspectives and skills as they pertain to working with young children and families from diverse backgrounds, with diverse abilities and in diverse settings. **Prerequisite(s):** *Admission to teacher education pre-professional licensure program.* **Corequisite(s):** *IECE 300 and IECE 303*

IECE 303. Development of Young Children Birth Through Age 8**Credits 3.00 PeopleSoft Course ID 012506 Grading Basis GRD**

This course provides students with an understanding of the development of infants, toddlers, and young children with and without exceptionalities. Skills for observing, recording and interpreting the behavior of the young child as a basis for adult intervention and guidance are developed. **Corequisite(s):** *IECE 300 and IECE 301.*

IECE 321. Initial Field Experience in IECE**Credits 1.00-2.00 PeopleSoft Course ID 012507 Grading Basis CNC**

This first intermediate field experience provides candidates opportunities to use their knowledge of child development to observe and assess children and then

to plan meaningful learning environments and experiences for those children. Repeatable twice for a maximum of two credit hours. **Prerequisite(s):** *EXED 200.*

IECE 322. Curriculum and Instruction in Inclusive Early Childhood Education**Credits 3.00 PeopleSoft Course ID 012508 Grading Basis GRD**

This course explores, analyzes, and evaluates curriculum and methodology related to the design and management of a nurturing, supportive, and challenging inclusive learning environment for children ages birth - 8 years. Emphasis is on the physical environment, design and selection of curricular components, the role of play in the curriculum, skills for professional intervention and interaction, and use of technology to facilitate young children's learning. **Corequisite(s):** *IECE 321 and IECE 324.*

IECE 324. Assessment of the Young Child**Credits 3.00 PeopleSoft Course ID 012509 Grading Basis GRD**

This course provides students with an understanding of the assessment of young children's development, ages birth to eight years, with and without exceptionalities. Students will be introduced to and apply informal and formal assessment to be used in decision making and educational planning and delivery.

IECE 421. Intermediate Field Experience in IECE**Credits 2.00 PeopleSoft Course ID 012510 Grading Basis CNC**

The advanced field experience provides students opportunities to use their knowledge of child development to plan meaningful learning experiences. Students will learn how the adult's role in supporting children's behavior and content knowledge enhances the classroom community. **Prerequisite(s):** *IECE 300, IECE 301 and IECE 322.*

IECE 423. Intermediate Practicum II**Credits 2.00 PeopleSoft Course ID 012512 Grading Basis CNC**

This second intermediate practicum provides candidates opportunities to use their knowledge of child development and assessment to create learning environments and experiences for children. Candidates will learn more about the adult's role in supporting children and managing behavior.

IECE 450. Contemporary Family Issues in Inclusive Education**Credits 3.00 PeopleSoft Course ID 013468 Grading Basis GRD**

This course will examine how students' own cultural values shape their interactions with children and families as well as provide concrete, practical strategies for effective and culturally competent interactions with children and families. **Prerequisite(s):** *A "C" or better in IECE 324.*

IECE 460. Instructional Practices in Numeracy**Credits 3.00 PeopleSoft Course ID 012513 Grading Basis GRD**

This course provides students with the knowledge, skills, and understandings necessary to design and implement effective mathematics programs for young children, birth to age eight, with and without exceptionalities. Focus is on appropriate mathematical content, teaching strategies, and manipulative materials from a developmental perspective with special emphasis on adaptations designed to meet the needs of all children. **Prerequisite(s):** *IECE 421 and IECE 423.* **Corequisite(s):** *IECE 461, IECE 462 and IECE 464.*

IECE 461. Advanced Field Experience in IECE**Credits 2.00-3.00 PeopleSoft Course ID 012514 Grading Basis CNC**

The advanced field experience provides students opportunities to use their knowledge of child development to plan meaningful learning experiences. Students will learn how the adult's role in supporting children's behavior and content knowledge enhances the classroom community. **Prerequisite(s):** *IECE 421.*

IECE 462. Instructional Practices in Natural Sciences for Young Children

Credits 3.00 PeopleSoft Course ID 012515 Grading Basis GRD

This course provides students with the knowledge, skills and understandings to design and implement effective natural science programs for all young children, birth to age eight. Focus is on appropriate science content, teaching strategies and materials from a developmental perspective with a special emphasis on adaptations designed to meet the needs of children with disabilities. **Prerequisite(s):** IECE 421 and IECE 423. **Corequisite(s):** IECE 460, IECE 461, IECE 464 and IECE 466.

IECE 464. Instructional Practices in Social Studies for Young Children**Credits 3.00 PeopleSoft Course ID 012516 Grading Basis GRD**

This course provides students with the knowledge, skills and understandings to design and implement effective social studies programs for all young children, birth to age eight. Focus is on appropriate social studies content, teaching strategies, and materials from a developmental perspective designed to meet the needs of all young children. Students will use technology to support access to the learning environment and curriculum. **Prerequisite(s):** IECE 421 and IECE 423. **Corequisite(s):** IECE 460, IECE 461, IECE 462 and IECE 466.

IECE 466. Managing Classrooms and Guiding Behavior**Credits 3.00 PeopleSoft Course ID 012517 Grading Basis GRD**

This seminar examines research and professional literature on effective strategies for guiding young children's behavior and managing groups. IECE 466 uses experiences in IECE 461 as a foundation for reflection, dialogue and development of a personal philosophy of classroom management.

Prerequisite(s): IECE 421 and IECE 423. **Corequisite(s):** IECE 460, IECE 461, IECE 462 and IECE 464.

IECE 470. Individualized Behavior Intervention for Young Children**Credits 3.00 PeopleSoft Course ID 014130 Grading Basis GRD**

This course provides the student with exposure to and knowledge of various systematic, positive, individualized behavioral interventions as they apply to young children. The student will develop skills in using these behavior interventions, as appropriate, with young children exhibiting difficulties in learning, behavior and/or social skills.

IECE 480. Student Teaching in Inclusive Early Childhood Education**Credits 5.00 PeopleSoft Course ID 014131 Grading Basis CNC**

This student teaching experience provides students with opportunities to apply, in learning environments for young children, the knowledge, skills and dispositions acquired throughout their teacher licensure program. Under the guidance of university supervisors and professionally licensed cooperating teachers, the student teacher gradually assumes full responsibility as the responsible inclusive early childhood educator. Students majoring in inclusive early childhood education must complete this course twice for a total of 10 credit hours. **Corequisite(s):** IECE 481.

IECE 481. Seminar in Inclusive Early Childhood Education**Credits 3.00 PeopleSoft Course ID 014132 Grading Basis GRD**

This seminar accompanies IECE 480. Student Teaching and provides students with the opportunity to reflect on, evaluate and improve their experiences as pre-professional educators of young children. Students will evaluate and build their own resiliency, identify ethical dilemmas, and engage in joint problem solving and ethical decision making related to their student teaching experience. Students will enhance their abilities to collaborate with professional colleagues, families and other service providers. **Corequisite(s):** IECE 480.

Independent Scholars

IND 200. Interdisciplinary Scholarship: Introduction to the Independent Scholars Major at JMU**Credits 3.00 PeopleSoft Course ID 013488 Grading Basis GRD**

IND 200 is designed to introduce students to the Independent Scholars major, and to the concepts of interdisciplinary study. Students will explore interdisciplinary research in a range of contemporary areas of study, including scientific, environmental, political, social, and cultural perspectives. Students will also gain familiarity with the possibilities for individualized study at JMU. Successful completion of the course will involve the development of proposals for individualized curricula.

IND 300. Independent Scholars Workshop**Credits 3.00 PeopleSoft Course ID 013656 Grading Basis GRD**

IND 300 is a three-credit workshop course designed to provide students in the Independent Scholars major with methodological competencies linked to major learning objectives across their curriculum, including independent research methods, preparing presentations, data visualization, research methods, working with teams and enhancing intellectual creativity. **Prerequisite(s):** IND 200.

IND 499A. Independent Scholars Senior Project**Credits 1.00 PeopleSoft Course ID 013860 Grading Basis GRD**

This is a three-semester course sequence involving independent research based on the student-designed curriculum, to be completed by all independent scholars majors. The course is offered as parts A, B and C for one, three, and two credits per semester, respectively. **Prerequisite(s):** *Permission of the independent scholars directors.*

IND 499B. Independent Scholars Senior Project**Credits 3.00 PeopleSoft Course ID 013861 Grading Basis GRD**

This is a three-semester course sequence involving independent research based on the student-designed curriculum, to be completed by all independent scholars majors. The course is offered as parts A, B and C for one, three, and two credits per semester, respectively.

IND 499C. Independent Scholars Senior Project**Credits 2.00 PeopleSoft Course ID 013862 Grading Basis GRD**

This is a three-semester course sequence involving independent research based on the student-designed curriculum, to be completed by all independent scholars majors. The course is offered as parts A, B and C for one, three, and two credits per semester, respectively.

Individualized Study

IS 200. Individualized Study Major Program Development**Credits 3.00 PeopleSoft Course ID 008492 Grading Basis GRD**

This introductory course is designed to prepare students for transition into higher education programs. Specific content includes focusing a concentration, creating an individualized program, technology in higher education, accessing career resources, career decision making skills, self-awareness, life planning and identifying college level experiential learning. Students will apply the principles of academic writing, use technology and available resources to successfully navigate within higher education, and demonstrate effective communication skills to include critical thinking and analysis. **Prerequisite(s):** *Individualized Study majors only.*

IS 203. Portfolio Development Workshop**Credits 1.00 PeopleSoft Course ID 008933 Grading Basis CNC**

A short course designed to support students for transition into higher education programs. Specific content includes identifying college-level experiential learning, documenting learning outcomes achieved from experience, documenting learning, determining credit request and organizing a portfolio assessment. **Prerequisite(s):** *Individualized Study Majors only.*

IS 205. Orientation to Learning Services**Credits 1.00 - 6.00 PeopleSoft Course ID 008978 Grading Basis GRD**

A short orientation course designed to prepare students for transition into higher education programs. Specific content includes using the university library, accessing university support services, managing time, developing appropriate study techniques, participating in cultural and workplace diversity exercises, implementing goal-setting strategies, and participating in wellness, nutrition, and stress management programs.

IS 206. Researching, Writing and Documenting Prior Learning

Credits 3.00 PeopleSoft Course ID 013249 Grading Basis GRD

This course provides an opportunity for students to analyze and articulate college-level learning they have acquired outside a classroom context. Specific content includes identifying college-level learning, writing narrative evaluations of learning, integrating multiple sources of learning and disciplinary theory, producing and arranging sufficient documentation of learning, and organizing a portfolio for assessment. At the end of the class, students who have completed all of the assignments will have the components of a portfolio ready for submission for credit evaluation. May not be repeated. **Prerequisite(s):** *Individualized study majors only and successful completion of IS 200.*

IS 250. Service Learning

Credits 1.00 - 6.00 PeopleSoft Course ID 001677 Grading Basis GRD

Leadership, citizenship, and professional competencies may be acquired through community service experiences. Documented service learning competence will be assessed by the Center for Leadership, Service, and Transition and credit awarded, as appropriate. **Prerequisite(s):** *BIS 203*

IS 270. Selected Topics

Credits 1.00 - 6.00 PeopleSoft Course ID 011184 Grading Basis GRD

In-depth study of selected topics with current importance and interest to lower division students that are not otherwise covered in the regular course offerings of academic departments/schools. Course content will vary. **Prerequisite:** Approval of the "Course Agreement Form" by the Individualized Study department head.

IS 290. Special Studies

Credits 1.00 - 6.00 PeopleSoft Course ID 007086 Grading Basis GRD

Designed to give students an opportunity to do lower-division independent study in selected interdisciplinary areas under the supervision of a faculty member in the appropriate department/school. **Prerequisite:** Approval of the "Course Agreement Form" by the Individualized Study department head.

IS 300. Sponsored Learning

Credits 1.00 - 6.00 PeopleSoft Course ID 009403 Grading Basis GRD

A structured learning activity related to a student's area of study and sponsored by an employer, volunteer agency, or other appropriate organization.

IS 480. Cooperative Studies

Credits 1.00 - 6.00 PeopleSoft Course ID 002348 Grading Basis GRD

Two or more upper-division students may elect to study cooperatively in a selected area of current importance and interest under the supervision of a faculty member in the appropriate department/school. **Prerequisite:** Approval of the "Course Agreement Form" by the Individualized Study department head.

IS 490. Special Studies

Credits 1.00 - 6.00 PeopleSoft Course ID 004484 Grading Basis GRD

Designed to give students an opportunity to do upper-division independent study in selected interdisciplinary areas under the supervision of a faculty member in the appropriate department/school. **Prerequisite:** Approval of the "Course Agreement Form" by the Individualized Study department head.

IS 498. Individualized Study Project

Credits 3.00 - 6.00 PeopleSoft Course ID 004791 Grading Basis GRD

An in-depth study of an interdisciplinary topic directly related to the student's area of concentration. A final oral report is required. **Prerequisite(s):** *Approval of the "Course Agreement Form" by the Individualized Study department head.*

IS 499. Honors

Credits 6.00 PeopleSoft Course ID 005660 Grading Basis GRD

Multiple-semester course. **Prerequisite(s):** *Approval of the "Course Agreement Form" by the Individualized Study department head and the Honors Program.*

Industrial Design

INDU 200. Introduction to Industrial Design

Credits 6.00 PeopleSoft Course ID 013758 Grading Basis GRD

This studio course introduces students to the professional field of industrial design. Students will develop conceptual and manual skills including aesthetics, research, critical thinking, drawing, model making, digital imaging and communication. The course emphasizes real world experience through a combination of studio work, demos, workshops, lectures and field trips. Students will work both individually and collaboratively to design and prototype new products/services and present their concepts for critique. **Prerequisite(s):** *Industrial design majors only; ART 102, ART 104 and ART 106, or instructor permission.*

INDU 202. Industrial Design Studio

Credits 6.00 PeopleSoft Course ID 013785 Grading Basis GRD

Industrial Design Studio builds on the fundamentals of INDU 200. Projects will address design thinking, research methods, user analysis, project definition and iterative process. Course work will further explore design sketching and drawing techniques, prototyping, collaboration, concept development, and aesthetics. **Prerequisite(s):** *INDU 200*

INDU 208. Portfolio Review

Credits 0.00 PeopleSoft Course ID 013760 (Repeatable once for pass/fail standing)

Portfolio review required to enroll in industrial design courses at upper division standing. May be repeated once for pass/fail standing. **Prerequisite(s):** *INDU 200 and INDU 202. Corequisite(s):* *INDU 202.*

INDU 220. CAD I: 3D Modeling

Credits 3.00 PeopleSoft Course ID 010858 Grading Basis GRD

This course will introduce students to principles used in 3D Computer-Aided Design (CAD). Technologies to draw three dimensionally on the computer will be considered as a discipline within itself, and students will be instructed to use the machine for design exploration. Various software packages will be utilized during the semester. **Prerequisite(s):** *Successful completion of or concurrently enrolled in INDU 200, and/or permission from instructor; Industrial Design majors only.*

INDU 292. Topics in Industrial Design

Credits 1.00-3.00 PeopleSoft Course ID 014215 Grading Basis GRD (Repeatable)

Study of selected topics in industrial design at the introductory level. May be repeated when course content changes. See MyMadison for current topics.

INDU 300. Product Design

Credits 6.00 PeopleSoft Course ID 013786 Grading Basis GRD

This course expands on foundations learned in INDU 200 and INDU 202 and emphasizes a research-driven design process as it applies to the design of objects, including commercial products, packaging design, furniture and more. Students will use quantitative and qualitative research methods and analyze market segments and/or users.

INDU 302. Transportation Studio

Credits 6.00 PeopleSoft Course ID 013787

A study of transportation system design utilizing a multi-disciplinary effort. Students will engage with civil engineers, city planners, urban designers, community members and various stakeholders to understand transportation needs and develop creative solutions. **Prerequisite(s):** *INDU 208*

INDU 380. Materials and Processes

Credits 3.00 PeopleSoft Course ID 013756 Grading Basis GRD

Combination studio and lecture course introducing students to historic, contemporary and emerging materials and manufacturing processes used in the creation of mass manufactured goods. **Prerequisite(s):** *Declared industrial design major, successful completion or concurrent enrollment in INDU 200, or permission of instructor.*

INDU 390. Independent Studies in Industrial Design

Credits 1.00 – 3.00 PeopleSoft Course ID 010659 Grading Basis GRD

Independent activity at the intermediate level, such as research or studio practice, under faculty supervision. Projected studies in any area of the school's offering must be arranged with the instructors who will direct them. Offered only with the consent of the instructor.

INDU 392. Topics in Industrial Design

Credits 3.00 PeopleSoft Course ID 012166 Grading Basis GRD (Repeatable)

Study of selected topics in art, art history, graphic design, interior design, or industrial design at the intermediate level. May be repeated when course content changes. See MyMadison for current topics.

INDU 400. Systems and Services

Credits 6.00 PeopleSoft Course ID 013788

This studio course aims to engage students in a systems based approach to problem solving. Students will design and test concepts and solutions that focus on interaction and experience. The course emphasizes problem framing, system and service prototyping, graphic design and illustration, user interaction/user experience, and end-user engagement. **Prerequisite(s):** *INDU 208.*

INDU 402. Social Innovation and Social Entrepreneurship

Credits 6.00 PeopleSoft Course ID 013757 Grading Basis GRD

This advanced studio explores design problems and solutions ranging from sanitation and poverty to environmental degradation and access to basic human services. Students will work individually and on teams to target specific areas of need and develop proposals to create products, systems and services to address those needs while generating revenue. **Prerequisite(s):** *INDU 208*

INDU 404. Industrial Design Advanced Special Topics Studio

Credits 6.00 PeopleSoft Course ID 013700 Grading Basis GRD (Repeatable)

Study of selected topics in industrial design at the advanced level. May be repeated when course content changes.

INDU 406. Senior Thesis Studio

Credits 6.00 PeopleSoft Course ID 013712 Grading Basis GRD

Industrial design students with senior standing submit a proposal focused on developing a semester long studio project. **Prerequisite(s):** *INDU 208 and Senior Standing; or, Permission of the Instructor*

INDU 408. Swing Studio Option

Credits 6.00 PeopleSoft Course ID 014108 Grading Basis GRD

Students may take a six credit hour studio in ARCD or the equivalent in any one other SADAH studio disciplines (i.e., ART 240 and ART 340). The ID program coordinator must approve proposals for swing studio options in advance. Art and design elective courses taken for the ID advanced studio requirement may not be double-counted as swing studios. **Prerequisite(s):** *INDU 208.*

INDU 490. Independent Studies in Industrial Design

Credits 1.00 – 3.00 PeopleSoft Course ID 012241 Grading Basis GRD

Independent activity, such as research or studio practice, under faculty supervision. Projected studies in any area of the school's offering must be arranged with the instructors who will direct them. Offered only with the consent of the director.

INDU 491. Studio Assistant

Cross listed with: *ARCD 491, ARED 491, ART 491, GRPH 491*

Credits 1.00 – 3.00 PeopleSoft Course ID 012198 Grading Basis GRD

An on-campus program monitored on an individual basis designed to provide practical studio experience in the visual arts. Students will learn safe studio practices and management skills, including material use, inventory control, and the proper operation of equipment found within various individual classroom studios. **Prerequisite(s):** *Permission of the instructor and director.*

INDU 492. Topics in Industrial Design

Credits 3.00 – 6.00 PeopleSoft Course ID 012168 Grading Basis GRD

(Repeatable)

Study of selected topics in art, art history, graphic design, interior design, or industrial design at the advanced level. May be repeated when course content changes. See MyMadison for current topics. **Prerequisite(s):** *INDU 208*

INDU 496. Internship in Industrial Design

Credits 1.00 – 8.00 PeopleSoft Course ID 012179 Grading Basis GRD

An off-campus program prepared and monitored on an individual basis. Internships are designed to provide practical experience in the arts.

Information Technology

IT 101. Introduction to Information Technology

Credits 3.00 PeopleSoft Course ID 014274 Grading Basis GRD

This introduction to the field of information technology is designed to prepare students for a successful career, with an emphasis on developing skills with computers, hardware and software, problem-solving, troubleshooting, studying, and time management. The course also compares information technology with related fields such as computer science, computer engineering and information systems. Topics include networking, databases, computing systems and platforms, cybersecurity, web and mobile systems, and application programming.

IT 203. Information Security and Privacy

Credits 3.00 PeopleSoft Course ID 014273 Grading Basis GRD

This course teaches computer security principles and incident prevention and management. It covers the information assurance dimensions of availability, integrity, authentication, confidentiality and non-repudiations to ensure secure transmission, storage and processing of information. **Prerequisite(s):** *Sophomore standing or permission of the instructor.*

IT 212. Digital Electronics

Credits 3.00 PeopleSoft Course ID 014310 Grading Basis GRD

This course introduces students to digital systems, logic design and the underlying hardware of computer systems. Topics include number systems and binary representations, digital logic gates, various combinational logic blocks, and sequential circuits as well as an introduction to programmable logic devices and basic computer architecture. Design and analysis of circuits will be covered in theory as well as practiced in the laboratory using appropriate industry tools and equipment.

IT 215. Introduction to Telecommunications, Networking and Security

Credits 3.00 PeopleSoft Course ID 014390 Grading Basis GRD

This course introduces students to telecommunications, networking and security concepts. Students learn interactively and collaboratively how networked applications and services are implemented and secured using

wireless and wired networks, network services, and protocols. Topics include command-line administration, virtualization, packet analysis, physical/network/transport addresses, the Internet, network services, network applications and security. Students will perform hands-on exercises integrating and troubleshooting networked applications, network security techniques, methods and services. **Prerequisite(s):** *MATH 231 or MATH 233 or MATH 235.*

IT 240. Database Administration

Credits 3.00 PeopleSoft Course ID 014391 Grading Basis GRD

This course provides an introduction to database administration focused on securing and maintaining modern database systems in various hosting environments. Through hands-on exercises, students gain knowledge of database deployment and administration, including backup and recovery.

Prerequisite(s): *CS 149.*

IT 301. Web Technologies

Credits 3.00 PeopleSoft Course ID 014392 Grading Basis GRD

This course provides an introduction to web technologies including languages, the client-server architecture, networking, database concepts and web services. Students learn how to develop web applications that are dynamic, secure and usable. **Prerequisite(s):** *IT 240 and IT 215.*

IT 302. Societal and Ethical Issues in Information Technology

Credits 3.00 PeopleSoft Course ID 014393 Grading Basis GRD

This course is a survey of professional, societal and ethical issues in information technology. Topics include professional responsibilities, privacy, intellectual property, risk identification and evaluation, IT governance, economic and availability factors of IT work, and environmental issues. Students develop skills in assuming and defending positions on societal and ethical issues through oral presentations and written reports. **Prerequisite(s):** *IT 203.*

IT 311. Operating Systems Administration

Credits 3.00 PeopleSoft Course ID 014394 Grading Basis GRD

This course introduces students to configuring, deploying and administering computer operating systems. Topics include system configuration, file systems, security, administration, network interfacing, multitasking, multiuser systems, device driver installation and analysis of operating system performance. Students will perform hands-on exercises administering an operating system.

Prerequisite(s): *IT 212.*

IT 313. Community Projects

Credits 3.00 PeopleSoft Course ID 014395 Grading Basis GRD

Students will apply information technology to projects from community partners, including education, government, business and industry. Students will use the skills they have developed to address real-world problems requiring technology solutions. Students will be divided into teams and each team will be responsible for one part of the semester-long project.

Prerequisite(s): *IT 333.*

IT 333. Advanced Networking for Information Technology

Credits 3.00 PeopleSoft Course ID 014396 Grading Basis GRD

This course presents a practical study of the underlying principles of networking and how these principles are deployed to provide efficient and secure networks for providing voice, data, video and mobility applications. Through hands-on exercises, students gain knowledge of network components, network protocols, network interfaces, network architectures/technologies, network facilities (wired and wireless), network services, network analysis and troubleshooting, network management and policies, network security, and networked applications. **Prerequisite(s):** *IT 215.*

IT 334. Computer Cyber Crime, Forensics and Auditing

Credits 3.00 PeopleSoft Course ID 014397 Grading Basis GRD

This course provides students an introduction to computer crime, relevant laws, agencies and standards. Topics include auditing, logging, forensics and related software, as well as legal principles such as chain of evidence, electronic document discovery, eavesdropping and entrapment. Students will perform hands-on exercises with forensics tools. **Prerequisite(s):** *IT 302.*

IT 340. Data Science and Machine Learning

Credits 3.00 PeopleSoft Course ID 014642 Grading Basis GRD

This course provides an overview of data science and machine learning for the Information Technology field. Students will learn how to extract data from sensing devices and use machine learning techniques for data analysis. Students will also learn about skills and tools available for data science.

Prerequisite(s): *CS 149 and MATH 220.*

IT 341. Mobile Applications

Credits 3.00 PeopleSoft Course ID 014398 Grading Basis GRD

This course is a project-based introduction to fundamental principles of application development for the mobile device environment, emphasizing design and programming paradigms that stem from the use of mobile devices. Topics include user interfaces, event-based programming, inter-process communications, networking, mobile-specific capabilities and performance in a resource-restricted environment. Students will perform hands-on exercises to develop and deploy a mobile application. **Prerequisite(s):** *IT 240 and IT 333.*

IT 342. Web Server Administration

Credits 3.00 PeopleSoft Course ID 014399 Grading Basis GRD

This course will introduce students to the management of web servers. Topics include administration activities and domains for computing systems, including configuration, deployment, performance analysis, backup and recovery. Students will perform hands-on exercises administering a web server.

Prerequisite(s): *IT 333.*

IT 347. Interactive Computing Systems

Credits 3.00 PeopleSoft Course ID 014639 Grading Basis GRD

This course examines design and evaluation of effective user interfaces of a computing system, beginning with principles for designing an IT product for user interaction separate from interactive software development. The development process includes iterative life cycle management, systems analysis, design, usability specifications, design representation techniques, prototyping, formative user-based evaluation and connectivity with other IT designs. The course emphasizes an integrative and cross-disciplinary approach with a primary emphasis on usability methods and the user interaction development process. **Prerequisite(s):** *IT 301.*

IT 435. Cryptography for Information Technology

Credits 3.00 PeopleSoft Course ID 014400 Grading Basis GRD

This course presents techniques in cryptography with analysis of its historical and societal consequences and an emphasis on meeting the needs of the information technology field. Topics include elementary combinatorics and number theory such as modular arithmetic and prime numbers, classical ciphers and accompanying attacks, and rotary machines as well as modern encryption schemes including public channel cryptography, secret-key ciphers, hash functions, side-channel attacks and post-quantum cryptography.

Prerequisite(s): *IT 203.*

IT 443. Cloud Computing and IoT Networks

Credits 3.00 PeopleSoft Course ID 014401 Grading Basis GRD

This course provides an introduction to the network architectures of cloud computing and the Internet of Things (IoT). Topics include software and hardware components including sensors and detectors for cloud and IoT

computing as well as their applications. Students will perform hands-on exercises using IoT applications. **Prerequisite(s):** IT 333.

IT 444. Capstone Project Design

Credits 1.00 PeopleSoft Course ID 014402 Grading Basis GRD

First course in a two-course sequence. Students will work in groups to propose an IT-based solution to address a problem or need in the community. **Prerequisite(s):** IT 333.

IT 445. Capstone Project Implementation

Credits 3.00 PeopleSoft Course ID 014403 Grading Basis GRD

In this second course in a two-course sequence, students will work in groups to implement and integrate their design, manage the project as a team, and prepare an oral and written report on the work. **Prerequisite(s):** IT 444.

IT 460. Advanced Cybersecurity

Credits 3.00 PeopleSoft Course ID 005284 Grading Basis GRD

This course focuses on the underlying principles of cybersecurity as applied to information and infrastructure network systems and services. Emphasis is placed on gaining hands-on knowledge in network access control, user authentication and authorization, intrusion and prevention systems, and network boundary protection. The course provides a hands-on introduction to the principles of cybersecurity penetration testing. **Prerequisite(s):** IT 333.

IT 461. Internetworking

Credits 3.00 PeopleSoft Course ID 001870 Grading Basis GRD

This course will introduce students to technologies and protocols typically used for interconnection of networks. Interconnections of networks deals with routing and establishing an end-to-end information transfer path among end nodes (clients and servers). **Prerequisite(s):** IT 333.

IT 462. Network Applications Development

Credits 3.00 PeopleSoft Course ID 006765 Grading Basis GRD

In this course, students will learn about the design and implementation of network-based applications, focusing on both the application layer and the transport layer of the TCP/IP protocol stack. Design and implementation of network-based applications using languages and architectures such as sockets, Java and Python. Concepts in distributed processing, including synchronization of interprocess communication and management of replicated data. Analysis of performance issues related to distributed applications. **Prerequisite(s):** IT 333.

IT 465. Wireless Networking and Security

Credits 3.00 PeopleSoft Course ID 012406 Grading Basis GRD

This course provides an introduction to wireless networking and wireless LAN security and forensics. Radio frequency fundamentals are introduced with emphasis on applications and services. Hands-on network configurations and analysis tools for wireless LAN are introduced and exercised with emphasis on network performance, security and forensic applications. **Prerequisite(s):** IT 333.

IT 480. Selected Topics in Information Technology

Credits 1.00 - 3.00 PeopleSoft Course ID 014413 Grading Basis GRD

This course will cover topics in information technology that are of interest but not otherwise covered in the regular information technology offerings of the department. May be repeated for credit when course content changes.

Prerequisite(s): Junior or senior standing only. Topics selected may dictate further prerequisites; students should consult the instructor prior to enrolling for the course.

IT 497. Independent Study

Credits 1.00 - 3.00 PeopleSoft Course ID 014437 Grading Basis GRD

This is an advanced course to give independent study experience under faculty supervision. May be taken multiple times for credit, but no more than three

credits may count toward the Information Technology major requirements.

Prerequisite(s): Junior or senior standing and permission of the program coordinator.

IT 499. Honors Capstone Implementation II

Credits 2.00 PeopleSoft Course ID 014638 Grading Basis GRD

This is the third course in a three-course sequence including IT 444 and IT 445. Students are divided into several groups or work individually; each group solves an IT-related problem or builds an IT application that help to solve a certain problem in the IT community. **Prerequisite(s):** IT 444 and instructor permission. **Corequisite(s):** IT 445.

Integrated Science and Technology

ISAT 100. Environmental and Energy Sustainability [C3PP]

Credits 3.00 PeopleSoft Course ID 012730 Grading Basis GRD

This course explores scientific and technical issues important to environmental and energy sustainability. Students study fundamental chemistry and physics and then apply this knowledge to better understand air quality, water quality, and conventional and alternative energy processes. The class also explores the societal impacts of our energy choices and the potential impact we as individuals can have through personal initiative. May be used for general education credit.

ISAT 112. Environmental Issues in Science and Technology (2,3) [C3PP]

Credits 4.00 PeopleSoft Course ID 002194 Grading Basis GRD

This course integrates the study of biology, chemistry and statistics within the context of environmental issues that include ozone depletion, acid rain, global warming, waste management and biodiversity. May be used for general education credit.

ISAT 113. Biotechnology Issues in Science and Technology [C3NS]

Credits 3.00 PeopleSoft Course ID 000203 Grading Basis GRD

This course is an applied introduction to biological systems, as an entry point for the understanding and analysis of biotechnological solutions. Topics include the way in which features of biochemical structure and function, information flow within cells, genetic inheritance, metabolism, and immune responses can be used to solve problems related to disease, food and the environment. May be used for general education credit. **Corequisite(s):** ISAT 113L.

ISAT 113L. Biotechnology Issues in Science and Technology Laboratory [C3L]

Credits 1.00 PeopleSoft Course ID 014490 Grading Basis GRD

Students will build practical and scientific literacy skills in the context of a life science wet lab. Descriptive and inquiry-based activities will include elements of study design, protocol implementation, and data collection and analysis. Recordkeeping and analytical skills will develop through in-lab documentation and comprehensive reports. **Prerequisite(s):** ISAT 113 **Corequisite(s):** ISAT 113

ISAT 150. Algebra Essentials

Credits 1.00 PeopleSoft Course ID 011503 Grading Basis GRD

This course provides review and practice in algebra concepts that are needed to successfully complete ISAT 151. Various mathematical models, including trigonometric, are also reviewed. The course is designed for students who possess a basic understanding of algebra but are not proficient in its application. **Corequisite(s):** ISAT 151

ISAT 151. Topics in Applied Calculus in ISAT [C3QR]

Credits 4.00 PeopleSoft Course ID 011502 Grading Basis GRD

This course introduces the concepts of differential and integral calculus and ordinary differential equations to model real-world applications in science, business, technology and economics. This course includes a computer

laboratory component emphasizing modeling and numerical methods. Course assumes familiarity with algebra and trigonometry. May be used for general education credit.

ISAT 151L. Topics in Applied Calculus Computer Laboratory

Credits 1.00 PeopleSoft Course ID 012541 Grading Basis GRD

This course is the computer laboratory portion of ISAT 151: Topics in Applied Calculus in ISAT. It is intended for students who already have AP credit or calculus lecture credit. Students will use numerical methods to solve mathematical modeling and calculus problems with Microsoft Excel. Students will study linear, polynomial, exponential, logarithmic, S-curve, and trigonometric models in business and the physical and natural sciences. Permission of instructor or department required.

ISAT 152. Topics in Applied Physics in ISAT

Credits 4.00 PeopleSoft Course ID 011519 Grading Basis GRD

This course introduces topics in general physics including one- and two-dimensional motion, mechanics, energy, waves, electricity, magnetism, optics, lasers, and early quantum theory. Vectors, algebra, and differential and integral calculus, are used to model physical system behavior. Laboratory experiments and computer exercises enhance understanding of the concepts.

Prerequisite(s): ISAT 151 or permission of the instructor

ISAT 160. Problem Solving Approaches in Science and Technology [C1CT]

Cross listed with: ISAT 160H

Credits 3.00 PeopleSoft Course ID 011653 Grading Basis GRD

This course examines issues in modern science and technology as a means to introduce, develop and enhance critical thinking and problem-solving skills. Current scientific and technological research and applications will be introduced to reinforce problem solving, instruction in systems thinking and critical inquiry. The course provides opportunities for using both oral and written communication in a variety of learning activities. May be used for general education credit

Prerequisite(s): *If you have already completed, or are currently registered for, a Cluster One Critical Thinking class, you must secure permission to receive credit for a second Cluster One Critical Thinking class.*

ISAT 160H. Problem Solving Approaches in Science and Technology [C1CT]

Cross listed with: ISAT 160

Credits 3.00 PeopleSoft Course ID 011653 Grading Basis GRD

This course examines issues in modern science and technology as a means to introduce, develop and enhance critical thinking and problem-solving skills. Current scientific and technological research and applications will be introduced to reinforce problem solving, instruction in systems thinking and critical inquiry. The course provides opportunities for using both oral and written communication in a variety of learning activities. May be used for general education credit.

ISAT 171. Governance of Sociotechnical Systems

Credits 3.00 PeopleSoft Course ID 005860 Grading Basis GRD

Solutions to human problems are mediated by economic and political institutions, which in turn help to shape technology and science. The course covers basic political and economic concepts, institutions and processes as they relate to American and international science and technology.

ISAT 180. Topics in Integrated Science and Technology

Credits 1.00 - 4.00 PeopleSoft Course ID 000849 Grading Basis CNC

Special topics in integrated science and technology which are of interest to the entry-level student. May be repeated for credit when course content changes. Students should consult the instructor prior to enrolling for the course.

Prerequisite(s): *Permission of instructor.*

ISAT 181. Student Research Project

Credits 1.00 - 6.00 PeopleSoft Course ID 011716 Grading Basis GRD

Research project on a science and technology topic of interest, as arranged with a faculty research adviser. Projects will include an assessment of the non-technical issues that surround the technical problem.

ISAT 190. Introduction to Holistic Problem Solving in the ISAT Major

Credits 1.00 PeopleSoft Course ID 013754 Grading Basis GRD

This course introduces holistic problem solving through the lens of the ISAT major. Skills such as effective teaming, information literacy, systems thinking, stakeholder identification and complex problem analysis are developed.

ISAT 203. Viral Discovery

Cross listed with: BIO 203

Credits 2.00 PeopleSoft Course ID 012283 Grading Basis GRD

An exploratory laboratory experience, designed for incoming freshmen. Students will learn about the life cycle and ecology of viruses infecting bacteria. Soil samples will be collected, and techniques for isolation and purification of the viruses will be performed by the students. Isolated viruses will be visualized using electron microscopy. The genomic material will be isolated and prepared for nucleic acid sequencing.

ISAT 204. Viral Genome and Bioinformatics

Cross listed with: BIO 204

Credits 2.00 PeopleSoft Course ID 012284 Grading Basis GRD

A computer-based laboratory experience, designed for students completing the Viral Discovery course. Students will learn to identify genes in a viral genome, compare the predicted proteins with known proteins in databases, describe the contents of the genome and notate all the relevant information for publication. Students will also research the role of bacteriophages in ecology and evolution.

ISAT 204H. Viral Genome and Bioinformatics - Honors

Credits 2.00 PeopleSoft Course ID 013809 Grading Basis GRD

A computer-based laboratory experience, designed for students completing the Viral Discovery course. Students will learn to identify genes in a viral genome, compare the predicted proteins with known proteins in databases, describe the contents of the genome and notate all the relevant information for publication. Students will also research the role of bacteriophages in ecology and evolution.

Prerequisite(s): ISAT 203 or BIO 203

ISAT 211. Issues in Modern Production Systems

Credits 3.00 PeopleSoft Course ID 008480 Grading Basis GRD

This course explores the principles of making, designing, integrating and improving production systems by asking the following questions: What is the right way to transform materials and who (or what) determines that? How do political, environmental, social, technological, legal/regulatory, ethical and economic factors impact the way individuals and organizations make, design, integrate and improve? How do production systems affect our ecosystem at different scales, ranging from artisanal craft methods to complex global supply chains and continuous production? Advanced manufacturing, continuous improvement and sustainable production systems will be explored. Includes a lab component.

ISAT 212. Energy Issues in Science and Technology

Credits 3.00 PeopleSoft Course ID 005767 Grading Basis GRD

Introduction to scientific and economic concepts relevant to energy. Concepts are taught within the context of three or four themes, e.g. residential energy efficiency, renewable energy sources, "make-or-buy" fossil energy application and space power systems. Themes may change from year to year reflecting contemporary issues and opportunities to link with industry and government agencies. **Prerequisite(s):** ISAT 152 or Permission of the Instructor.

ISAT 215. Telecommunications, Networking and Security

Credits 3.00 PeopleSoft Course ID 013650 Grading Basis GRD

This course introduces Telecom, Networking & Security concepts. Students learn how networked applications and services are designed, implemented and secured using wireless and wireline networks, network services and protocols. Examples of topics are Virtualization, Internet, Intrusion Detection & Prevention, Wireless Ethical Hacking, and Web Apps & Services. The course includes a lab component focusing on hands-on integration and troubleshooting of networked apps, network security methods and services. **Prerequisite(s):** ISAT 152 with a grade of "C-" or better or permission of instructor.

ISAT 231. Political Economy of Technology and Science**Credits 3.00 PeopleSoft Course ID 005860 Grading Basis GRD**

Solutions to human problems are mediated by economic and political institutions, which in turn help to shape technology and science. The course covers basic political and economic concepts, institutions, and processes as they relate to American and international science and technology.

ISAT 251. Topics in Applied Statistics in ISAT [C3QR]**Credits 3.00 PeopleSoft Course ID 011508 Grading Basis GRD**

This course introduces statistical thinking – the discipline and methods for collecting, analyzing, and interpreting data for making decisions, doing science, and understanding our world. Topics covered include an introduction to data analysis methods, probability and chance, statistical reasoning and inference, and experimental design. The course includes a laboratory component emphasizing hands-on analysis of data taken from a variety of applications in ISAT. May be used for general education credit. **Prerequisite(s):** *Sophomore standing or permission of the instructor.*

ISAT 252. Programming and Problem Solving**Credits 3.00 PeopleSoft Course ID 007599 Grading Basis GRD**

This course is an introduction to computational thinking and formal logic. Students create software to solve problems in applied science, business and engineering taking social context into account. Programming paradigms include procedural, object-oriented and event-driven. Emphasis is placed on effective analysis, planning, documentation, communication and teamwork in professional software development settings. **Prerequisite(s):** *Sophomore standing or permission of the instructor.*

ISAT 253. Instrumentation and Measurement in ISAT**Credits 3.00 PeopleSoft Course ID 000976 Grading Basis GRD**

Fundamental nature of measurement in the practice of science, how and why measurements are taken, and representative instrumentation. Data collection in science (measuring physical properties and biometrics), statistical tools for analyzing data and visualization of data. **Prerequisite(s):** ISAT 152 and ISAT 251 or MATH 220.

ISAT 271. Technology, Science and Society**Credits 3.00 PeopleSoft Course ID 000970 Grading Basis GRD**

This course introduces the social aspects of technology and science. It covers social science methods and related philosophical and ethical analyses. Students learn how the practice of science relates to the human-built world and why critical evaluations of science and technology policies are important.

Prerequisite(s): ISAT 171.

ISAT 280. Projects in ISAT**Credits 1.00 - 4.00 PeopleSoft Course ID 000039 Grading Basis GRD**

Projects or special topics in integrated science and technology which are of interest to the lower-division student. May be repeated for credit when course content changes. Projects or topics selected may dictate prerequisites. Students should consult the instructor prior to enrolling for the course.

Prerequisite(s): *Permission of instructor.*

ISAT 290. Introduction to Systems Thinking for Complex Problems**Credits 3.00 PeopleSoft Course ID 013753 Grading Basis GRD**

Students will develop skills to apply systems thinking methodology to investigate, define and describe complex problems. They will build a recognition and appreciation of common causal structures that influence the evolution of a problem over time. Structures include interactions between cultural, institutional, natural and technological factors. Collaboration, integration of diverse knowledge sources and project management skills will be emphasized. **Prerequisite(s):** ISAT 190 or permission of the instructor and ISAT 212 with a grade of "C-" or better.

ISAT 300. Applied Computing, Instrumentation and Measurement**Credits 3.00 PeopleSoft Course ID 014426 Grading Basis GRD**

This course covers the fundamental nature of measurement in the practice of science and technology. It examines how computing technology is applied to the collection, storage, processing and presentation of data. In addition to discussions about how and why measurements are taken, the uncertainty involved in all measurements and the statistical methods used for analysis will be covered. Students will learn about measurement systems and how they can be networked using wireless and wireline technology for data acquisition. This course includes a project-based lab component focusing on hands-on integration and troubleshooting of networked measurement systems, including computation methods for data analysis and data visualization. **Prerequisite(s):** ISAT 252 and a minimum grade of "C-" in either ISAT 251 or MATH 220.

ISAT 301. Instrumentation and Measurement in Energy (0, 2)**Credits 1.00 PeopleSoft Course ID 009684 Grading Basis GRD**

Instrumentation is used to acquire data from representative systems that include mechanical, thermal, solar, chemical and nuclear energy. Students analyze the data to enhance understanding of these forms of energy. Energy transport processes are also characterized. Computer-based data acquisition is emphasized. **Prerequisite(s):** ISAT 212 and ISAT 253 or permission of the instructor.

ISAT 302. Instrumentation and Measurement of the Environment (0, 2)**Credits 1.00 PeopleSoft Course ID 009190 Grading Basis GRD**

Traditional and contemporary analytical laboratory and field techniques used in environmental quality monitoring are surveyed. Emphasis is placed on understanding the physical, chemical and biological basis of these techniques. Hands-on laboratory and field work will be emphasized, in addition to quality control/assurance of environmental data.

ISAT 303. Production Systems Automation Lab**Credits 1.00 PeopleSoft Course ID 004004 Grading Basis GRD**

The role, function and implementation of sensors, actuators and controls in open and closed loop control systems are explored and implemented in constant process flexible manufacturing systems. Programmable logic controllers (PLCs) are emphasized. The synthesis of automation technologies is realized by exploring physical mechatronic systems via hands-on lab experiences using real world equipment.

ISAT 305. Instrumentation and Measurement in Biotechnology (0, 2)**Credits 1.00 PeopleSoft Course ID 007920 Grading Basis GRD**

This course provides a hands-on experience of the techniques and instrumentation used in the modern biotechnology laboratory. Topics include aseptic techniques for establishing microbial cultures, detection and analysis of recombinant DNA molecules, protein purification, SDS gel electrophoresis and the use of PCR technology for genetic analysis. **Prerequisite(s):** ISAT 113 and ISAT 113L; or BIO 240; or permission of instructor.

ISAT 306. Instrumentation and Measurements in Data Communications and Networking**Credits 1.00 PeopleSoft Course ID 011507 Grading Basis GRD**

This is an introductory course on hands-on performance measurements of data, computer and telecommunications channel transmission techniques. The course includes a set of lab experiments focusing on the physical and data link layers of data communications and telecommunications networks.

Prerequisite(s): ISAT 360 or instructor permission**ISAT 310. Energy Fundamentals I****Credits 3.00 PeopleSoft Course ID 008896 Grading Basis GRD**

This course covers the integration of fundamental concepts from physics, chemistry, mathematics and engineering within the context of energy applications. Principles governing energy transformations, transport and conversion, including laws of thermodynamics, chemical and nuclear reactions and thermal science. **Prerequisite(s):** ISAT 212 is the prerequisite.

ISAT 311. Role of Energy in Modern Society**Credits 3.00 PeopleSoft Course ID 008752 Grading Basis GRD**

This course covers the role of energy in the U.S. and world economies. Geology of energy-valued natural resources: size, quality and economics of domestic and world resource base. Models for energy use by different sectors. The role of energy in global climate change; other energy-related environmental concerns; and the implications for national and international security will be studied. **Prerequisite(s):** ISAT 212 or consent of instructor.

ISAT 320. Fundamentals of Environmental Science and Technology I**Credits 4.00 PeopleSoft Course ID 010377 Grading Basis GRD**

This course provides the student with a basic understanding of environmental processes, pollution and control technologies. Grounded in ecology and systems thinking, ISAT 320 integrates classroom learning, field-based studies and laboratory analysis of field samples to explore local aquatic and terrestrial environments and contextualize them in broader scientific knowledge.

Prerequisite(s): ISAT 112 or permission of the instructor.**ISAT 321. Fundamentals of Environmental Science and Technology II****Credits 3.00 PeopleSoft Course ID 005616 Grading Basis GRD**

This course builds on the student's basic understanding of environmental pollution, processes and control technologies in the context of systems thinking and sustainable practices. Content includes solid and hazardous waste and its management, the principles of environmental risk assessment, air quality analysis and management, drinking water and wastewater treatment, and life cycle analysis. **Prerequisite(s):** ISAT 320.

ISAT 330. Sustainable Manufacturing Systems**Credits 3.00 PeopleSoft Course ID 008613 Grading Basis GRD**

Introduces and applies principles of production planning and control with an emphasis on sustainable production and environmentally conscious manufacturing. Topics include scheduling, inventory control, facility layout, capacity planning, forecasting and lean manufacturing. **Prerequisite(s):** ISAT 211 and ISAT 251 or permission of instructor.

ISAT 331. Cyber-Physical Industry**Credits 3.00 PeopleSoft Course ID 007749 Grading Basis GRD**

This course provides an in-depth treatment and understanding of manufacturing automation and control technologies, material transportation and identification, cyber physical systems, and human factors and ergonomics in manufacturing. Topics include industrial control systems, hardware components for automation and process control, computer numerical control, industrial robotics, programmable logic control (PLC), material transport systems, storage systems, automatic identification and data capture, critical

infrastructure, smart cities, cognition, decision making, biomechanics at work, and human computer interaction. **Prerequisite(s):** ISAT 211.

ISAT 340. Database Design, Implementation and Management**Credits 3.00 PeopleSoft Course ID 000308 Grading Basis GRD**

This course provides an introduction to database technology as a component of information systems. The course will introduce students to the design and management of databases through relational database management systems, including the use of Structured Query Language (SQL), forms and reports. Current developments in the role and deployment of a database as part of the application stack will be covered. **Prerequisite(s):** ISAT 252 or permission of instructor.

ISAT 341. Machine Learning and Data Science**Credits 3.00 PeopleSoft Course ID 010324 Grading Basis GRD**

Explores the data science and machine learning landscapes by developing and implementing programs capable of learning from data extracted from several knowledge domains. Students will use production ready tools that facilitate model development and deployment to a variety of computing platforms. **Prerequisite(s):** Junior standing and ISAT 340 or CS 149.

ISAT 344. Intelligent Systems**Credits 3.00 PeopleSoft Course ID 000363 Grading Basis GRD**

In-depth introduction to current and future intelligent systems, including expert systems, neural networks, hybrid intelligent systems, and other intelligent system technologies and their development, uses and limitations.

ISAT 348. The Multimedia Industry**Credits 3.00 PeopleSoft Course ID 005164 Grading Basis GRD**

Students are introduced to a variety of tools for viewing multimedia and to the issues in designing effective human-computer interactions. This includes an introduction to the many forms of media that occur in computing systems (text, graphics, images, sound, animation) and to the characteristics of well-produced media. **Prerequisite(s):** ISAT 340 with sophomore standing is the prerequisite.

ISAT 350. Biotechnology for the New Millennium I**Credits 3.00 PeopleSoft Course ID 009892 Grading Basis GRD**

This course covers the scientific foundations and historical development of biotechnology. Specific topics include living system nanotechnology; cell structure and function; origins of genetic engineering; and recombinant DNA technology. **Prerequisite(s):** ISAT 113/ISAT 113L or equivalent.

ISAT 351. Biotechnology for the New Millennium II**Credits 3.00 PeopleSoft Course ID 000514 Grading Basis GRD**

This course is a continuation of ISAT 350 and describes applications of biotechnology in agriculture, industry and medical science as well as associated social, ethical and philosophical issues. Topics include study of an emerging infectious disease, energy transduction in living systems and novel applications of biotechnology. **Prerequisite(s):** ISAT 113, or BIO 240 and BIOT 260 or permission of the instructor.

ISAT 360. Introduction to Networking and Security**Credits 3.00 PeopleSoft Course ID 013319 Grading Basis GRD**

This course focuses on the underlying principles of networking and how these principles are utilized to provide efficient and secure networks in support of voice, data, video and mobility services and applications. Emphasis is also placed on understanding the network standards and protocols, network architectures, network security, network analysis/trouble shooting and network management issues and resolution/mitigation strategies. The course has a technology (hands-on) focus. **Prerequisite(s):** ISAT 252 or CS 149 or instructor permission. **Corequisite(s):** For CIS majors: CIS 304.

ISAT 361. Fundamentals of Data Communications and Networking II

Credits 3.00 PeopleSoft Course ID 011506 Grading Basis GRD

The course is an introduction to data communications, telecommunications and networking. The focus is on the physical and data link layers. At the physical layer, it includes network models, data and signal rates, digital & analog transmission (modulation), bandwidth utilization (multiplexing), switching (circuit, packet). At the data link layer, it includes error detection & correction, multiple access methods, LANs (wired, wireless, connecting), WANs (SONET, ATM, cellular, satellite). **Prerequisite(s):** ISAT 360 or instructor permission

ISAT 390. Holistic Problem-Solving Workshop I**Credits 3.00 PeopleSoft Course ID 013759 Grading Basis GRD**

In this course, students will practice holistic problem-solving approaches to analyze and propose solutions for complex problems that involve a mix of scientific, technological and societal elements. The course will use a variety of case studies that represent real-world problems that significantly impact society. For each case study, students will explore the system dynamics from which the problem emerges and evaluate both short- and long-term consequences of possible solutions. **Prerequisite(s):** ISAT 290 and ISAT 271.

ISAT 391. Holistic Problem-Solving Workshop 2**Credits 3.00 PeopleSoft Course ID 013793 Grading Basis GRD**

This course continues the practice of holistic problem-solving initiated in ISAT 390. In this follow-up course, students will operate in a self-guided manner to analyze and propose solutions for complex problems that involve a mix of scientific, technological, and societal elements. Students will explore the system dynamics from which the problem emerges and evaluate both short- and long-term consequences of possible solutions. **Prerequisite(s):** ISAT 390

ISAT 401. Advanced Computer-Based Instrumentation I**Credits 3.00 PeopleSoft Course ID 007197 Grading Basis GRD**

This is largely a laboratory course in which students build and program their own instruments. Topics include programming techniques for real-time instrumentation programming; buffered analog and digital input and output; timing considerations; passive analog filters and active analog filters; digital-filtering techniques; and real-time programming issues. **Prerequisite(s):** ISAT 253 and ISAT 242.

ISAT 410. Sustainable Energy Development**Credits 3.00 PeopleSoft Course ID 002519 Grading Basis GRD**

This course is concerned with science and the applications of solar and other renewable technologies, e.g., solar thermal electric, photovoltaics, wind power, biomass-derived alcohols, solar hydrogen and ocean thermal energy conversion. Energy storage systems and materials, combined renewable conventional systems for peaking and load management and alternative energy sources for transportation will be studied. **Prerequisite(s):** ISAT 310 or permission of the instructor.

ISAT 411. Energy Economics and Policy**Credits 3.00 PeopleSoft Course ID 009693 Grading Basis GRD**

This course is concerned with methods for analyzing the economics, environmental and societal benefits of energy technologies. Topics include optimization techniques, utility planning and finance, cost-benefit techniques, discounting for time and risk, econometric models and input-output analysis. The role of government in determining energy costs supply and markets will be considered. **Prerequisite(s):** ISAT 311 or permission of the instructor.

ISAT 413. Options for Energy Efficiency**Credits 3.00 PeopleSoft Course ID 007049 Grading Basis GRD**

This course makes detailed examination of new technologies to increase the efficiency of energy conversion, transportation systems and end-use technologies. Examples include MHD, combined-cycle systems, advanced

nuclear reactors, intelligent transportation systems, high-efficiency lighting, energy management and utilization of low-temperature heat. Consideration is made of the socioeconomic and governmental barriers to energy efficiency.

Prerequisite(s): ISAT 310 and ISAT 311 or consent of the instructor.

ISAT 414. Energy Fundamentals II**Credits 3.00 PeopleSoft Course ID 011552 Grading Basis GRD**

Introduction to the sciences of fluid mechanics and heat transfer and the physical laws governing the mechanical behavior of liquids and gasses. Conservation of mass, energy and momentum. Discussion of heat transfer by one-dimensional conduction, convection and radiation. Fluid statics, internal and external fluid flow, pipe networks and heat exchanger analysis. **Prerequisite(s):** ISAT 310 or permission of the instructor.

ISAT 416. International Energy Studies**Credits 3.00 PeopleSoft Course ID 008814 Grading Basis GRD**

Study-abroad course examining international energy problems and providing team-oriented project experiences. Addresses energy issues associated with economic and social development. Project participation, tours and meetings with local experts illustrate energy-related problems that are compared with those in the United States. **Prerequisite(s):** ISAT 212 and ISAT 253.

ISAT 420. Environmental Analysis and Modeling**Credits 3.00 PeopleSoft Course ID 002380 Grading Basis GRD**

This course explores applications of mathematical techniques and computer models to the environmental field. The course introduces the principles underlying environmental analysis and modeling, including limitations and pitfalls. Several environmental models and analytical systems are then discussed and applied, using a variety of computational platforms.

Prerequisite(s): ISAT 321 or permission of the instructor.

ISAT 421. Environmental Policy & Regulation**Credits 3.00 PeopleSoft Course ID 009742 Grading Basis GRD**

This course will familiarize students with basic environmental laws and regulations. The course discusses the purpose of environmental policy, the role of environmental economics in policy decisions and the policy instruments available to environmental regulators. Current federal and state statutes affecting waste disposal, air quality and water quality are discussed.

Prerequisite(s): ISAT 321.

ISAT 422. Industrial Environmental Management**Credits 3.00 PeopleSoft Course ID 000791 Grading Basis GRD**

This course addresses environmental issues faced by industry, including such topics as waste management, chemical inventories, pollution prevention and discharge permitting. Industrial ecology is introduced as an approach to the development of a sustainable industrial society, including treatment of life cycle analysis, design for environment, environmentally conscious manufacturing and ISO14000.

ISAT 423. Environmental Remediation**Credits 3.00 PeopleSoft Course ID 005653 Grading Basis GRD**

This course will examine chemical, physical, economic and regulatory aspects of the remediation of contaminated soil and groundwater. Topics include chemical properties of major contaminants, environmental site assessments, remediation design, and current and emerging remediation technologies and their limitations in soil and groundwater restoration. **Prerequisite(s):** ISAT 321 or permission of the instructor.

ISAT 424. Natural Resource Management**Credits 3.00 PeopleSoft Course ID 010571 Grading Basis GRD**

This course focuses on how resource management decisions affect the human and natural communities involved. Topics include definition and importance of

natural resources, resource management styles and policies, and planning for resource conservation. Conservation biology is introduced as a tool for developing sustainable resource use policies. Mandatory weekend field trip.

Prerequisite(s): ISAT 321 or permission of the instructor.

ISAT 425. Environmental Hydrology

Credits 3.00 PeopleSoft Course ID 007429 Grading Basis GRD

This course integrates the study of surface water and ground water hydrology and examines current technologies used to assess the behavior and quality of water in the environment. Topics include monitoring and management at the watershed level, the influence of wetlands on water quality, and the impact of current regulations. **Prerequisite(s):** ISAT 320.

ISAT 426. Environmental Information Systems

Credits 3.00 PeopleSoft Course ID 011234 Grading Basis GRD

This course provides students with practical experience applying advanced environmental information systems technologies to environmental problems. Students will employ such technologies as decision support systems, geographic information systems, expert systems, relational databases, multimedia systems, and modeling and simulation. This course is often offered in a study-abroad format.

ISAT 427. Industrial Hygiene

Credits 3.00 PeopleSoft Course ID 006195 Grading Basis GRD

This course provides an introductory survey of the field of industrial hygiene. Chemical hazards are addressed first, focusing on respiratory and dermal exposures, followed by a treatment of physical hazards including sound, radiation and temperature. The course includes industrial case studies illustrating administrative and engineering controls in common use.

ISAT 428. Industrial Ecology

Credits 3.00 PeopleSoft Course ID 011564 Grading Basis GRD

Industrial Ecology, the 'science of sustainability', seeks to encourage the development of a sustainable industrial society. This course introduces and examines this relatively new field of inquiry and practice. We address various practical topics which are associated with Industrial Ecology, including Life Cycle Assessment, Design for Environment, and Environmentally Conscious Manufacturing.

ISAT 429. Sustainability: An Ecological Perspective

Cross listed with: GEOG 429

Credits 3.00 PeopleSoft Course ID 011555 Grading Basis GRD

This course examines present global environmental impacts and efforts made to change production and consumption patterns toward those that reduce impact or promote increased ecosystems health. The focus lies in understanding the basic resources of productivity including soils, agricultural systems, agroforestry, forestry, and aquatic environments and applying solutions on a personal and community level. **Prerequisite(s):** ISAT 320.

ISAT 430. Materials and Manufacturing Processes

Credits 3.00 PeopleSoft Course ID 003769 Grading Basis GRD

The purpose of this class is to introduce chemical and physical properties of materials (metals, ceramics, polymers, composites, sustainable materials), manufacturing processes (casting, finishing, molding, forming, joining, and machining), and automated design and manufacturing. The topics include the following:

- Material properties and product attributes
- Engineering materials
- Solidification processes
- Processing of metals and ceramics
- Metal forming and sheet metalworking

Metal removal processes

Property enhancing & surface processing operations

Joining and assembly processes

Prerequisite(s): ISAT 211 or permission of the instructor.

ISAT 431. Advanced Manufacturing Processes and Systems

Credits 3.00 PeopleSoft Course ID 006108 Grading Basis GRD

This course provides an introduction to processes, systems and sustainability improvement in advanced manufacturing. Topics include advanced manufacturing processes and systems, such as additive manufacturing, nano/micro-manufacturing, digital manufacturing, industrial sustainability analysis and systems thinking in sustainable manufacturing. **Prerequisite(s):** ISAT 330 and ISAT 251

ISAT 432. Materials Selection in Product Design

Credits 3.00 PeopleSoft Course ID 002959 Grading Basis GRD

This course deals with the interplay among requirements specifications, design, economics, environment, energy, materials selection, fabrication, manufacturing cost and product life cycle considerations. Students will complete a product design case study from requirements to final design concept, including translating requirements to design, selecting appropriate materials and choosing between design and production concepts using qualitative and quantitative analytical methods. **Prerequisite(s):** ISAT 330 and junior standing or permission of the instructor.

ISAT 433. Foundations of Lean and Six Sigma

Credits 3.00 PeopleSoft Course ID 004416 Grading Basis GRD

This course addresses the questions: What is Lean? What is Six Sigma? How are they different, why do many organizations combine them and how should they be applied in complex industrial/supply chain systems? Students will learn to evaluate process stability, map and model business processes, select and apply appropriate analytical methods, and implement and document the improved process. **Prerequisite(s):** ISAT 330 or admission to the global supply chain management minor.

ISAT 434. Industrial Informatics

Credits 3.00 PeopleSoft Course ID 013970 Grading Basis GRD

Hands-on application of advanced analytical methods selected from topics in supply chain management, forecasting, measurement systems analysis (MSA), quality and process improvement, marketing research and analytics, design of experiments (DOE), and reliability modeling. Data acquisition from enterprise databases and industrial sources and analysis leveraging big data are addressed. **Prerequisite(s):** ISAT 211 and ISAT 251 or MATH 220 or admission to the global supply chain management minor.

ISAT 435. Lean Six Sigma Applications

Credits 3.00 PeopleSoft Course ID 000488 Grading Basis GRD

This course focuses on real-world applications of Lean Six Sigma in production and supply chain environments with an emphasis on current events. Students will learn advanced analytical methods and explore the implications of just-in-time production in an increasingly connected and complex global environment. **Prerequisite(s):** ISAT 433 or permission of instructor.

ISAT 437. Technological Innovation and Sustainable Design

Credits 3.00 PeopleSoft Course ID 013965 Grading Basis GRD

This course is a holistic approach to the nature of technological innovation as an intrinsic dynamic of human society, with an explicit focus on understanding why innovations succeed or fail and the compelling need for sustainable design. The critical relationship between technical innovation and the design process is explored through case studies that illustrate sustainability-inspired models of technology such as biomimicry, design for environment, appropriate

technology, zero waste production systems and human-centered design.

Prerequisite(s): ISAT 211 and junior standing or permission of the instructor.

ISAT 440. Cultural, Ethical, Legal and Social Issues in Computing

Credits 3.00 PeopleSoft Course ID 008226 Grading Basis GRD

An exploration of the cultural, ethical, legal and social issues inherent in computing. This course is designed to strengthen students' proclivity and ability to consider and communicate about the reciprocal impacts of computing technology on people and the environment, particularly as it pertains to their roles in designing, developing, procuring, implementing or maintaining computing technology within an organization. **Prerequisite(s):** ISAT 271 or permission of instructor.

ISAT 441. Simulation and Modeling

Credits 3.00 PeopleSoft Course ID 014090 Grading Basis GRD

The purpose of this class is to introduce students to the use of models to understand, analyze and improve systems in several areas of science and technology through computer simulation modeling techniques. **Prerequisite(s):** ISAT 211 or permission of instructor.

ISAT 445. Software Engineering and Agile Development

Credits 3.00 PeopleSoft Course ID 000829 Grading Basis GRD

Study of means for the development and maintenance of high quality software products delivered on time and within budget. Topics include requirements analysis and specification, software design, implementation, testing, maintenance, project management, ethics, and the responsibilities of software engineering professionals. Focuses primarily on agile software development. **Prerequisite(s):** ISAT 340

ISAT 447. Interaction Design

Cross listed with: WRTC 447

Credits 3.00 PeopleSoft Course ID 012149 Grading Basis GRD

Study of and practice with processes, principles, tools, models, and techniques for designing interactions between humans and digital products and systems. Topics include physiological and psychological factors affecting interaction design, interaction design process, interaction models, styles, and paradigms, design notations and representations, prototyping, and interaction design evaluation.

ISAT 449. Emerging Topics in Applied Data Science

Credits 3.00 PeopleSoft Course ID 014315 Grading Basis GRD

This course will cover selected emerging topics in applied data science of interests (e.g., automation, data privacy and security, data science in the cloud, artificial neural network and deep learning, natural language processing, text mining). It will help students develop the meta-cognitive skills needed to become proficient in using and identifying new technologies (including programming languages, architectures, modalities, etc.) that may best contribute to solving a problem in an environment in which technologies are changing briskly. **Prerequisite(s):** ISAT 341 or permission of instructor.

ISAT 451. Biotechnology in Industry and Agriculture

Credits 3.00 PeopleSoft Course ID 005203 Grading Basis GRD

This course illustrates the applications of biotechnology in agriculture and industry, linking scientific discoveries to business and manufacturing practices. Topics include pharmaceutical product development, genetic engineering in agriculture, biotechnology in food processing and regulatory issues.

Prerequisite(s): ISAT 330 or ISAT 350 or BIO 240 and BIOT 260 or permission of the instructor.

ISAT 452. Medical Biotechnology

Credits 3.00 PeopleSoft Course ID 008069 Grading Basis GRD

This course will explore the way in which modern biotechnology can be used as a tool to define and solve problems related to human health. Insights will come through the review and critical analysis of molecular evidence, modeling of the human body and the drug discovery pipeline as complex systems, and an identification and appreciation for stakeholder perspectives. **Prerequisite(s):** ISAT 351 or BIO 240 or permission of the instructor.

ISAT 454. Computer Applications in Biotechnology

Credits 3.00 PeopleSoft Course ID 003434 Grading Basis GRD

Students learn how complex biological molecules support and regulate processes in living systems, through building interactive computer models of protein and nucleic acid structure and function. The course requirements include written and oral presentations and creation of Web pages.

Prerequisite(s): ISAT 351 or BIO 240 and BIOT 260 or permission of the instructor.

ISAT 455. Regulatory Issues Biotechnology

Credits 3.00 PeopleSoft Course ID 009889 Grading Basis GRD

This course examines the policies and guidelines of federal government agencies that regulate the use of recombinant DNA technology, genetically engineered organisms and the manufacturing of biotechnology products. Issues of product safety, product labeling, physical and biological containment, environmental release, and mammalian cloning are presented. **Prerequisite(s):** ISAT 350 or BIO 240 and BIOT 260 or permission of the instructor.

ISAT 456. Ethical, Legal and Social Implications of Biotechnology

Credits 3.00 PeopleSoft Course ID 010658 Grading Basis GRD

The ethical, legal, and social implications of the field of biotechnology and its applications are explored in this course. Students will analyze at an in-depth level the social impacts and ethical implications of human subjects and biological materials research, cloning, human genetic engineering, and transgenic agricultural crops. **Prerequisite(s):** ISAT 171 and ISAT 271 or BIOT 260 or permission of instructor.

ISAT 459. Awareness and Understanding of Chemical, Biological, and Radiological Weapons of Mass Destruction

Cross listed with: IA 459

Credits 3.00 PeopleSoft Course ID 012089 Grading Basis GRD

This course introduces awareness, science, and societal impact of Weapons of Mass Destruction (WMD) agents. Students study the development of vaccines, therapeutic and diagnostic drugs used in the detection and treatment of these agents. The course consists of lectures and safety training sessions that introduce tactical and logistical techniques used against chemical, biological and radiological WMD.

ISAT 463. Network Analysis and Design

Credits 3.00 PeopleSoft Course ID 010740 Grading Basis GRD

In-depth introduction to the techniques and tools used to design and analyze computer and telecommunications networks. Overview of issues related to network performance, including the impact on cost, reliability and security.

ISAT 464. Issues in the Telecommunications Business

Credits 3.00 PeopleSoft Course ID 010987 Grading Basis GRD

Addresses complex business concepts and issues in the telecommunications industry. Explores the interrelation of the economics of the telecommunications industry with ensuing social, ethical and security issues. Discusses topics in product and service creation, marketing, customer service and billing and electronic commerce.

ISAT 473. Local Agriculture and Farm Internships

Credits 4.00 PeopleSoft Course ID 013044 Grading Basis GRD

The objectives for this course include understanding local ecology and its impacts on farming, as well as how farming impacts local ecology; practicing diversified farming techniques; understanding how small-scale farms operate as businesses; examining localization and slow-food movements and recognizing the impacts of globalized or industrial food and fiber production; identifying the strengths and limitations of small-scale farming.

ISAT 474. Political Ecology

Credits 3.00 PeopleSoft Course ID 013789 Grading Basis GRD

This seminar focuses on political ecology as a framework and body of work that examines environmental change, particularly notions of degradation, through analyses of complex social, economic, political and ecological interrelationships. Course materials raise and address questions of how people study and have perceived ways in which human societies and various 'environments' shape one another over time, as well as the contexts in which 'development' efforts are constructed, implemented and, sometimes, abandoned.

ISAT 477. Complex Systems and How They Fail

Credits 3.00 PeopleSoft Course ID 011860 Grading Basis GRD

Interdisciplinary study of complex system operation, interdependencies, and failure focusing on real-world critical infrastructure systems (e.g., electric power, telecommunications, and health). system response to natural and human-induced hazards, including cascading effects. Examination of risk management strategies including technical and policy solutions.

ISAT 480. Topics in Integrated Science & Technology

Credits 1.00 - 4.00 PeopleSoft Course ID 006412 Grading Basis GRD

Topics in integrated science and technology which are of interest to the upper-division student but not otherwise covered in the regular course offerings. Offered only with the approval of the program coordinator. May be repeated for credit when course content changes. Students should consult the instructor prior to enrolling for the course. Topic selected may dictate prerequisite.

Prerequisite(s): *Junior or senior standing only.*

ISAT 483. Topics in Science, Technology and Society

Credits 3.00 PeopleSoft Course ID 014348 Grading Basis GRD

This course engages students in key theories, methods and approaches from the field of science, technology and society (STS) and its related fields (history, philosophy, law, sociology, anthropology, political science, economics and communication) to address selected problems at the intersection of science, technology and society. **Prerequisite(s):** ISAT 171 and ISAT 271.

ISAT 485. Gender Issues in Science

Cross listed with: WGSS 485

Credits 3.00 PeopleSoft Course ID 012465 Grading Basis GRD

An interdisciplinary course that looks at the scientific process, science practitioners, and science students through the lens of gender analysis. Students read literature, lead discussions, perform experiments, and analyze both data and processes to address the effects of educational systems on the preparation and careers of scientists, the influence of politics and culture on scientific inquiry, and the effects of critiques grounded in gender analyses on understanding the scientific process.

ISAT 487. Science, Technology and Society Futures Laboratory

Credits 1.00 - 3.00 PeopleSoft Course ID 014346 Grading Basis GRD

In the STS futures lab students deepen their knowledge of key theories and methods of the field of science, technology and society. Students conduct independent research on a topic under close mentorship of faculty and within an engaged community of students who are interested in creatively and critically reflecting on the roles of science and technology within society. The

futures lab focuses particularly on hands-on practices of anticipating and ethically reasoning about plausible sociotechnical futures and developing skills in cross-disciplinary collaboration and communication. Students also have the opportunity to engage with experts in diverse disciplinary domains through facilitating workshops with invited guest experts to the lab and conducting interviews. Additionally, students can participate in faculty research, develop research publications and participate in conference presentations. The course is repeatable for a maximum of six credit hours. **Prerequisite(s):** ISAT 171 or ISAT 271 or declared STS minor.

ISAT 490. Capstone Experience I

Credits 1.00 PeopleSoft Course ID 006296 Grading Basis GRD

This is the first of a four-course sequence. Students perform an independent research project, either alone or within an investigative team, to identify and analyze a science- or technology-based problem (broadly defined), culminating in a public presentation at the ISAT Senior Symposium. In this course, students will identify an appropriate problem to investigate for their Capstone experience and assemble a Team to develop their Capstone Proposal.

ISAT 491. Senior Capstone Project I

Credits 1.00 PeopleSoft Course ID 009222 Grading Basis GRD

First course in a three-course sequence. Student generates an idea for and writes a proposal for an independent or team-based research project. Student must identify and analyze a science- or technology-based problem (broadly defined), identify potential solutions, recommend an approach, and prepare a written proposal.

ISAT 492. Senior Capstone Project II

Credits 2.00 PeopleSoft Course ID 000868 Grading Basis GRD

Second course in a three-course sequence. Student performs the bulk of the research needed for an independent research project, either alone or within an investigative team, to address a technologically based problem.

ISAT 493. Senior Capstone Project III

Credits 2.00 PeopleSoft Course ID 004567 Grading Basis GRD

Third course in a three-course sequence. Student finishes the research and prepares an oral and a written report on the work (either alone or within an investigative team), addressing a technologically based problem and developing alternative solutions.

ISAT 495. Technology in Our World: Better By Design

Credits 3.00 PeopleSoft Course ID 012096 Grading Basis GRD

Students explore the importance of design in technology and engineering and contrast the design process with the scientific method. This includes evaluating functional requirements, ergonomics, usability, cost, risk and environmental impact. Students complete a design project integrating these factors to address a real-world problem.

ISAT 499A. Senior Honors Thesis I

Cross listed with: First course of a three-course sequence. Student generates an idea for and writes a proposal for an independent research project that meets the requirements set forth by the Honors program. Student must identify and analyze a science- or technology-based problem (broadly defined), identify potential solutions, recommend an approach, and prepare a written proposal. Fulfills same requirements as ISAT 491.

Credits 1.00 PeopleSoft Course ID 006890 Grading Basis GRD

ISAT 499B. Senior Honors Thesis II

Cross listed with: Second course in a three-course sequence. Student begins the research necessary for an independent research project that meets the requirements set forth by the Honors program. Student pursues the approach

described in his or her proposal from ISAT 499A. Fulfills same requirements as ISAT 492.

Credits 1.00 PeopleSoft Course ID 000281 Grading Basis GRD

ISAT 499C. Senior Honors Thesis III

Credits 2.00 PeopleSoft Course ID 000860 Grading Basis GRD

Third course in a three-course sequence. Student completes the research for and prepares an oral and written presentation of their results for an independent research project that meets the requirements set forth by the Honors program. Student completes and presents (in written and oral form) the project described in his or her proposal from ISAT 499A. Fulfills same requirements as ISAT 493.

ISAT 499D. Honors Thesis

Credits 2.00 PeopleSoft Course ID 005876 Grading Basis OPT

Intelligence Analysis

IA 150. Introduction to Intelligence Analysis

Credits 3.00 PeopleSoft Course ID 014040 Grading Basis GRD

This course presents a holistic understanding of intelligence analysis: its core definition, domains where it is practiced, how it is done by both individuals and teams, relevant reasoning and technological methods, the significance of communication skills, the broader context that shapes the process, and relevant principles of professional ethics and legal compliance. This course is required for students majoring in intelligence analysis and is recommended for those considering the major. **Prerequisite(s):** *First year students and sophomores only; others by permission of the program.*

IA 200. Introduction to National Security Intelligence

Credits 3.00 PeopleSoft Course ID 012201 Grading Basis GRD

Intelligence analysis is a complex, dynamic process that includes determining the intelligence needs, data collection, pre-processing, analysis and production of the customer's product. This is an introduction to the history, structure and practices of the national security intelligence community (IC). The course is team-oriented, project-based and grounded in the relevant legal and ethical context. **Prerequisite(s):** *Either a minimum grade of "C" in IA 150 or current enrollment in IA 150.*

IA 210. Introduction to Global Competitive Intelligence

Credits 3.00 PeopleSoft Course ID 012128 Grading Basis GRD

This course will focus on global competitive intelligence (CI): the tools and methods that enhance strategic and tactical decision making in the analysis and interpretation of business data related to current and emerging competitors. This course is team oriented, project based and grounded in the relevant legal and ethical context. **Prerequisite(s):** *A minimum grade of "C" in IA 150.*

IA 240. Technology Applications in a Networked World

Credits 3.00 PeopleSoft Course ID 013643 Grading Basis GRD

Students develop broad technical competencies of current and future technology applications, such as databases, spreadsheets and Internet-of-things. They explore technical-socio-ethical aspects of the cyber world. This hands-on and team-based course supports development of working technical knowledge for accessing, evaluating, modeling and analyzing information and data for problem solving. Students develop a systematic appreciation of computing, network and cyber security. **Prerequisite(s):** *Either a minimum grade of "C" in IA 150 or current enrollment in IA 150.*

IA 241. Introduction to Programming and Data Science

Credits 3.00 PeopleSoft Course ID 013644 Grading Basis GRD

The course introduces students to data analysis through computer programming. The course will focus on key elements from data science that are critical to the intelligence analyst such as manipulating, processing, cleaning and crunching

data. The course will serve as a practical, modern introduction to scientific computing in Python, tailored for data-intensive applications. This course will introduce the Python language and libraries students need to effectively solve a broad set of data analysis problems. The course is hands-on and places emphasis on practical case studies with a broad scope of techniques useful for the data analyst. **Prerequisite(s):** *IA 240*

IA 250. Research Design and Writing for Intelligence Analysis

Credits 3.00 PeopleSoft Course ID 014041 Grading Basis GRD

In this course, students will learn how intelligence analysts can produce assessments using a research design framework and communicate those assessments effectively in writing. This includes how intelligence analysts develop research (intelligence) questions, conduct research, evaluate sources, choose methodologies, develop assessments and present those assessments in the form of an argument with an emphasis on precision, clarity and brevity in the written format. **Prerequisite(s):** *IA 150 and IA 200.*

IA 261. Hypothesis Testing

Credits 3.00 PeopleSoft Course ID 012202 Grading Basis GRD

Examines hypothesis testing in national, military, counter, and competitive intelligence. By comparing alternate theories in terms of their explanatory power and predictive success, students will learn the most relevant methods for integrating facts into unified theories, assessing theories, and properly qualifying and reevaluating theories to compensate for risk and uncertainty. **Prerequisite(s):** *Either a minimum grade of "C" in IA 150 or current enrollment in IA 150.*

IA 280. Selected Project in Intelligence Analysis

Credits 3.00 PeopleSoft Course ID 012203 Grading Basis GRD

This course will examine projects of interest to lower-division students in intelligence analysis not otherwise offered in regular course offerings. They are offered only with the approval of the program director and they may be repeated when course content changes. Students should consult with the instructor prior to enrolling in the course. **Prerequisite(s):** *Junior standing.*

IA 300. Seminar on Issues in Intelligence Analysis

Credits 3.00 PeopleSoft Course ID 013908 Grading Basis GRD

This course will focus on important issues in the theory and practice of intelligence analysis. Students will learn about intelligence analysis by examining its purpose, history, methods, processes, context of existing challenges and recommendations for improvement. **Prerequisite(s):** *IA 200.*

IA 312. Causal Analysis

Credits 3.00 PeopleSoft Course ID 011778 Grading Basis GRD

Examines causal analysis in national, military, counter- and competitive intelligence. By assessing a factor's amount and kind of efficacy, students will learn the most reliable methods for distinguishing between relevant/irrelevant events and factors, identifying and excluding "pseudo-causes," and anticipating higher order effects of a causal process. **Prerequisite(s):** *IA 261.*

IA 313. Counterfactual Reasoning

Credits 3.00 PeopleSoft Course ID 011777 Grading Basis GRD

Examines counterfactual reasoning in national, military, counter and competitive intelligence. By analyzing alternate scenarios and their consequences, students will learn the most relevant methods for employing creative thinking in generating, developing, and assessing possibilities; substantiating "after-action" reports, and structuring futures analysis. **Prerequisite(s):** *IA 312.*

IA 314. Strategy Assessment (Rational Decision Theory)

Credits 3.00 PeopleSoft Course ID 011776 Grading Basis GRD

Examines strategy assessment in national, military, counter, and competitive intelligence. By applying probabilities and goals to potential threats and

opportunities (short and long-term), students will learn the most relevant methods for formulating and evaluating possible courses of action, and projecting and explaining actions by assessing an agents' strategic interests and circumstances. **Prerequisite(s):** IA 313.

IA 340. Data Mining, Modeling and Knowledge Discovery

Credits 3.00 PeopleSoft Course ID 012204 Grading Basis GRD

Data mining is the nontrivial extraction of previously unknown and potential useful information from (large) data sets to help explain current behaviors and anticipate future outcomes. Students will apply data mining and knowledge discovery methods to data sets from business, industry and government. The course is team oriented, project based and grounded in the relevant legal and ethical context. **Prerequisite(s):** IA 241.

IA 341. System Dynamics Modeling, Simulation and Analysis

Credits 3.00 PeopleSoft Course ID 012205 Grading Basis GRD

System dynamics analysis is a perspective and a set of conceptual and computing tools to help us understand the structure and dynamics of complex systems. This course will apply system dynamics analysis to complex systems (problems) that involve the interplay of physical and social-political factors. The course is team-oriented, project-based and grounded in the relevant legal and ethical context. **Prerequisite(s):** IA 312

IA 342. Visualization Methods, Technologies and Tools for Intelligence Analysis

Credits 3.00 PeopleSoft Course ID 012206 Grading Basis GRD

Data visualization presents laboratory or simulation data or the results from sensors out in the field in a way that aids reasoning about and hypothesis building in complex data sets. This course will apply data visualization technologies and tools to timely data sets from business, industry and government. The course is team oriented, project based and grounded in the relevant legal and ethical context. **Prerequisite(s):** IA 340 or ISAT 252.

Programming and Problem Solving.

IA 360. Terrorism and Counterterrorism

Credits 3.00 PeopleSoft Course ID 013910 Grading Basis GRD

This course will address key concepts in the study of terrorism, to include definitions, history, justifications, explanations and strategies. It will also address the effectiveness of different kinds of counterterrorism strategies and policies and the role that intelligence analysis plays in the process. **Prerequisite(s):** IA 200.

IA 363. Apocalypticism, Religious Terrorism and Peace

Cross listed with: REL 363

Credits 3.00 PeopleSoft Course ID 012677 Grading Basis GRD

This course traces apocalypticism from its ancient Jewish and Christian roots to its contemporary manifestations in religious groups around the world. Since apocalypticism is a worldview that cuts across religious traditions, the course covers a variety of religious groups. The last half of the course focuses on the complex relationships between apocalyptic thinking and religious terrorism and entails an independent research project.

IA 365. Cyber Intelligence

Credits 3.00 PeopleSoft Course ID 013911 Grading Basis GRD

Cyber intelligence is the acquisition of information to identify and analyze cyber adversaries' capabilities, intentions and activities that can be used to support proactive decision-making. Students will explore common cyber security terminology (lexicon), frameworks and methodologies used to analyze cyber security threats in organizations. Using case studies, they will collect and analyze open source information to identify and monitor evolving threats and understand how adversaries operate.

IA 370. Advanced Competitive Intelligence

Credits 3.00 PeopleSoft Course ID 013909 Grading Basis GRD

Competitive intelligence is developing actionable foresight regarding competitive dynamics that can be used to enhance the speed and quality of decision-making. The main objectives of this course are to teach students to think and act strategically as a CI professional and to develop students' capacity to think strategically about a company, its business position, how it can gain sustainable competitive advantage and how its strategy can be implemented and executed successfully with the support of CI. **Prerequisite(s):** IA 210.

IA 375. Political Geography

Cross listed with: GEOG 375

Credits 3.00 PeopleSoft Course ID 001675 Grading Basis GRD

Geopolitical conflicts and issues are examined. Concepts such as territoriality, nationalism, religious and ethnic struggle, environmental degradation, and freedom and justice are discussed in the context of political unrest. Significant geopolitical theories and social and economic processes are explored.

IA 405. Ethics, Law and Intelligence Analysis

Credits 3.00 PeopleSoft Course ID 012208 Grading Basis GRD

This course will examine ethical and legal issues raised in the practice of intelligence analysis. It will draw on philosophical ethical theories and reasoning to explicate the issues addressed, and will explore the relevant constitutional and other legal constraints on the practice of intelligence analysis, particularly issues of information privacy, civil liberties and limitations on government action. **Prerequisite(s):** IA 314

IA 440. Intelligence Analysis Capstone Project Preparation

Credits 3.00 PeopleSoft Course ID 012209 Grading Basis GRD

This course will focus on preparing students for developing team projects in the IA Capstone Seminar. Students will individually identify, analyze, plan and report on a feasible capstone seminar project. Students will then organize teams and develop plans to complete a subset of the most promising projects in the Capstone Seminar. **Prerequisite(s):** Senior standing in the IA program and IA 314.

IA 450. Capstone Project in Intelligence Analysis

Credits 3.00 PeopleSoft Course ID 012210 Grading Basis GRD

Building on the Seminar on Issues in Intelligence Analysis students will complete and present solutions for team-based intelligence community or competitive intelligence IA projects. Students will produce written and oral technical reports/briefs of their results. **Prerequisite(s):** IA 440.

IA 459. Awareness and Understanding of Chemical, Biological and Radiological Weapons of Mass Destruction

Cross listed with: ISAT 459

Credits 3.00 PeopleSoft Course ID 012089 Grading Basis GRD

This course introduces awareness, science and societal impact of weapons of mass destruction (WMD) agents. Students study the development of vaccines and therapeutic and diagnostic drugs used in the detection and treatment of these agents. The course consists of lectures and safety training sessions that introduce tactical and logistical techniques used against chemical, biological and radiological WMD. **Prerequisite(s):** Basic chemistry and/or biology.

IA 460. All Hazards Response And Management Systems

Credits 3.00 PeopleSoft Course ID 013425 Grading Basis GRD

Incident Command Systems enables incident management by integration of facilities, equipment, personnel, procedures, and communications operating in a common organizational structure. ICS is used to organize near and long-term operations for a spectrum of emergencies, small to complex incidents, natural and man-made. ICS is used by government, many private and

nongovernmental organizations in 5 major functional areas: command, operations, planning, logistics, and finance and administration.

IA 480. Selected Topics in Intelligence Analysis

Credits 3.00 PeopleSoft Course ID 014413 Grading Basis GRD

This course will examine topics of interest to upper-division students in intelligence analysis not otherwise offered in regular course offerings. They are offered only with the approval of the program director and they may be repeated when course content changes. Students should consult with the instructor prior to enrolling in the course. **Prerequisite(s):** *Junior standing.*

IA 499A. Honor Thesis I

Credits 1.00 PeopleSoft Course ID 013213 Grading Basis GRD

This is an honors thesis proposal course. It is the first of the three-course sequence intended to satisfy the requirements for the honors program as well as the Intelligence Analysis program. Students will develop a thesis proposal, including objectives, audience, literature review, timeline and deliverables. The goal of the course is for the student to develop a compelling and complete senior thesis proposal. **Prerequisite(s):** *Junior standing; must be in the honors program.*

IA 499B. Honor Thesis II

Credits 3.00 PeopleSoft Course ID 013426 Grading Basis GRD

This is an honors thesis development course. It is the second of the three-course sequence intended to satisfy the requirements for the honors program as well as the Intelligence Analysis program. Most of the course will be jointly administered/taught with IA 440: Senior Seminar in Intelligence Analysis. In addition, students may be required to meet with the instructor to discuss progress on his or her project. **Prerequisite(s):** *Senior Standing and Honor Student.*

IA 499C. Honors

Credits 3.00 PeopleSoft Course ID 013215 Grading Basis GRD

This is an honors thesis completion course. It is the third of the three-course sequence intended to satisfy the requirements for the honors program as well as the Intelligence Analysis program. Most of the course will be jointly administered/taught with IA 450, Capstone Project in Intelligence Analysis. In addition, students may be required to meet with the instructor to discuss progress on his or her project. **Prerequisite(s):** *Senior standing; enrollment in the honors program.*

Interdisciplinary Liberal Studies

IDLS 350. Literacy and Society

Credits 3.00 PeopleSoft Course ID 012984 Grading Basis GRD

An exploration and analysis of societal literacy practices as viewed through cognitive, cultural, class, workplace, and technological lenses. **Prerequisite(s):** *WRTC 103.*

IDLS 380. American Indian and Indigenous Cultures

Credits 3.00 PeopleSoft Course ID 014353 Grading Basis GRD

This course examines culture change among American Indian and Indigenous peoples in North America, with a focus on the lived experiences, voices, distinct ways of knowing and unique forms of social and cultural expression of these populations from pre-Columbian to contemporary times. Issues including settler colonialism, Indigenous knowledge, identity, belonging, citizenship and sovereignty, myth-making, gender, health and well-being, creativity, and protest and resistance are examined to gain insight to both unique historical trajectories and allow comparison of broad-based cultural dynamics. This course integrates the multiple, often diverging, perspectives of historians, novelists, educators, activists, anthropologists, film directors, scientists and more in the study of American Indian and Indigenous culture history.

IDLS 381. Environmental Thought and Activism

Credits 3.00 PeopleSoft Course ID 014352 Grading Basis GRD

An exploration and analysis of the progression of environmental thought and activism in the United States with a focus on activism, climate, conservation, ecojustice, economic, environmental protection, literary, philosophical, political, preservation, resource, wilderness and wildlife issues.

IDLS 382. Contemporary United States

Credits 3.00 PeopleSoft Course ID 014351 Grading Basis GRD

An exploration and analysis of the United States at the present moment, with a focus on activist, cultural, economic, educational, environmental, foreign policy, gender, identity, political, social, social justice and sexual identity issues.

IDLS 384. Knowledge, Power and Inequality

Credits 3.00 PeopleSoft Course ID 014350 Grading Basis GRD

This course examines the evolutionary origins, historical trajectory and contemporary dynamics of inequality as a product of power relations rooted in human cultural knowledge and practice, with emphasis on modes of power defined by gender, age, sexual violence, education and cultural sovereignty, ethnic and racial identification, globalization and economic inequality, political polarization, and mobility and immigration. Examples primarily from North America from pre-Columbian to contemporary times and the perspectives of anthropologists, historians, fiction writers and poets, artists, educators, human rights activists, memoirists, politicians, economists and more are studied to untangle the dialectic of cultural-cognitive "ways of knowing" and the embodied experience of power and inequality.

IDLS 385. The Unfinished Journey of People of Color in the U.S.

Credits 3.00 PeopleSoft Course ID 014349 Grading Basis GRD

An exploration and analysis of the experiences, cultures and current challenges of people who identify as Asian American, Black, Latinx, Native Alaskan, Native American, Native Hawaiian and as multiethnic and multiracial. **Prerequisite(s):** *IDLS major, Liberal Studies minor or permission of instructor.*

IDLS 391. Study Abroad

Credits 1.00 - 6.00 PeopleSoft Course ID 012431 Grading Basis GRD

Credit for academically-grounded, interdisciplinary study abroad. Students seeking credit must secure the approval of the department head and a faculty supervisor who will provide the academic structure, assignments, and student evaluation.

IDLS 395. Topics in IDLS

Credits 1.00 - 6.00 PeopleSoft Course ID 012432 Grading Basis GRD

Examination of selected interdisciplinary topics of importance to Teacher Education content areas. May be taken for a maximum of six credit hours toward the major.

IDLS 400. Seminar in Liberal Studies

Credits 3.00 PeopleSoft Course ID 010966 Grading Basis GRD

Capstone seminar for IDLS studies in the Humanities/Social Sciences content area. Studies will apply different disciplinary perspectives to a single topic. Course requirements will emphasize superior written and oral communication skills, and the integration and application of content area knowledge to the teaching environment. Students must have completed their lower division Core requirements and be within one course of completing the concentration area. Education minors should be in their third semester of their teacher education program.

IDLS 486. Internship & Field Experience

Credits 1.00 - 6.00 PeopleSoft Course ID 012433 Grading Basis GRD

IDLS credit for academically-grounded internships and field experiences. Students seeking credit must secure the approval of the department head for

the use of academic structures, assignments, and evaluation plans provided by qualified internship or field experience supervisors.

IDLS 490. Independent Study in Liberal Studies

Credits 3.00 PeopleSoft Course ID 012238 Grading Basis GRD

Individualized projects in interdisciplinary liberal studies.

IDLS 499A. Honors

Credits 1.00 - 6.00 PeopleSoft Course ID 012239 Grading Basis GRD

IDLS 499B. Honors

Credits 1.00 - 6.00 PeopleSoft Course ID 012250 Grading Basis GRD

IDLS 499C. Honors

Credits 1.00 - 6.00 PeopleSoft Course ID 012332 Grading Basis GRD

International Affairs

INTA 295. Cross National Research Skills

Credits 4.00 PeopleSoft Course ID 005688 Grading Basis GRD

Students learn how to conduct research from theory formulation through data collection and hypothesis testing in the field of international affairs. Special emphasis on research and computer literacy. **Prerequisite(s):** MATH 220 , POSC 230 and POSC 240.

INTA 301W. The Washington Semester Experience: Global Affairs

Credits 3.00 PeopleSoft Course ID 012330 Grading Basis GRD

Part of the "Global Affairs" Washington Semester program, the course entails intensive study of a global theme. The theme's dynamics will be explored in varied settings: localities, nation-states, global geographic regions, and international organizations (both governmental and non-governmental). The course provides outlets for engagement with policy actors and institutions based in Washington, D.C., as well as for individual and group experiential learning activities.

INTA 489. Senior Seminar in International Affairs

Credits 3.00-4.00 PeopleSoft Course ID 007250 Grading Basis GRD

This is the capstone course in the international affairs major. It provides an interdisciplinary overview of the fields within international affairs and an opportunity for students to complete individual research projects on international problems. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** Senior INTA majors.

International Business

IB 200. Introduction to International Business

Credits 3.00 PeopleSoft Course ID 014221 Grading Basis GRD

A survey course to introduce students to the theory and practice of international business. The focus is on providing the skills and knowledge to successfully manage operations within the global environment. Not open to international business majors who have earned credit or are enrolled in COB 300.

IB 294. Internship Abroad

Credits 3.00 PeopleSoft Course ID 013599 Grading Basis CNC

A course providing students an opportunity to work in an organization abroad in order to gain insight into the practical side of modern business operations.

IB 298. Special Topics in International Business

Credits 3.00 PeopleSoft Course ID 011528 Grading Basis GRD

The course is designed to allow exploration of current topics in international business. Course content will vary. See program director for current content.

IB 480. International Business Theory and Policy

Credits 3.00 PeopleSoft Course ID 000571 Grading Basis GRD

The course is designed to serve as an application of theory for business students to allow them to put the total picture of international business together. **Prerequisite(s):** IB major, senior standing.

IB 490. Special Studies in International Business

Credits 1.00 - 3.00 PeopleSoft Course ID 000537 Grading Basis GRD

Designed to give capable students in international business an opportunity to complete an independent study under faculty supervision. **Prerequisite(s):** 2.8 GPA, recommendation of the instructor and approval of the director prior to registration.

IB 494. International Business Internship

Credits 3.00 PeopleSoft Course ID 002678 Grading Basis GRD

A course providing students an opportunity to work in and with an organization in order to gain insight into the practical side of modern international business operations. **Prerequisite(s):** IB major, completion of 85 credit hours and COB 300, minimum cumulative GPA of 3.0, and approval of the director of International Business program prior to registration.

IB 498. Special Topics in International Business

Credits 3.00 PeopleSoft Course ID 007150 Grading Basis GRD

An advanced course designed to allow exploration of current topics in international business. Course content will vary. See the program director for current content. **Prerequisite(s):** COB 300 and permission of the instructor.

IB 499A. Honors

Credits 1.00 PeopleSoft Course ID 005683 Grading Basis GRD

IB 499B. Honors

Credits 3.00 PeopleSoft Course ID 008318 Grading Basis GRD

IB 499C. Honors

Credits 1.00 - 3.00 PeopleSoft Course ID 003209 Grading Basis GRD

Interprofessional Education

IPE 201. Health Professionals in Diverse Communities

Credits 1.00 PeopleSoft Course ID 011816 Grading Basis GRD

An introduction to skills in professionalism & interprofessional collaboration in addressing local and global health challenges. First year pre-professional health students examine social determinants of health and diverse communities, and learn skills in reflection as they interact with health professionals and faculty.

IPE 202. Health Care Service in Diverse Communities

Credits 2.00 PeopleSoft Course ID 011815 Grading Basis GRD

This is the second course in a two-course sequence for first year, pre-professional health students in the Huber Learning Community. Students examine interprofessional perspectives on complex global health issues and apply skills in professionalism, integration, collaboration, and reflection to community-based, experiential service learning. **Prerequisite(s):** IPE 201

IPE 313. Issues and Applications of Family Caregiving: Caregiver's Community Network

Credits 1.00 - 2.00 PeopleSoft Course ID 014386 Grading Basis GRD

Students are assigned a CCN family managing caregiving responsibilities for an elder member (age 60+ years) and provide planned contact and support. Case strategies include: weekly visits, phone calls and self-care practices. This course is intended to benefit all participants (family caregivers, their care-receiving members and students) by offering an academic and service-focused experience that validates the common need for human connection, understanding and respect. Can be repeated for a maximum of three credits.

IPE 314. Rural Health: an Interprofessional Approach

Cross listed with: HTH 314, NSG 314, SOWK 314

Credits 3.00 PeopleSoft Course ID 013642 Grading Basis GRD

Students study, observe and participate in interprofessional assessment, planning and delivery of community-based primary health care in partnership

with residents and agencies of a host rural county. Learning activities will emphasize rural culture, rural health care and interprofessional practice.

IPE 391. Introduction to Informatics for Health Care Professionals

Credits 1.00 PeopleSoft Course ID 011338 Grading Basis GRD

Electronic health records and health apps exemplify how health information technology (IT) is changing health care today. Students will learn how health IT tools and big data can improve communication between health providers, support better patient outcomes, and reduce spending on health care. Designed with an emphasis on interprofessional collaborative practice, students will learn about their own and others' professional roles and responsibilities in achieving health goals using health IT.

IPE 401. Workshops in Interprofessional Education and Practice (IPE)

Credits 0.00 PeopleSoft Course ID 012996 Grading Basis CNC

HHS workshops offer a time-limited and concentrated focus on issues that are specific to interprofessional education and/or practice.

IPE 415. Ethical Decision-Making in Healthcare: an Interprofessional Approach

Cross listed with: NSG 415

Credits 1.00 PeopleSoft Course ID 011964 Grading Basis OPT

Health care ethics is a shared, relevant concern among health and human service disciplines and is an ideal vehicle for students from different fields to learn about one another's disciplines and to participate in interprofessional team analysis, discussion, and problem-solving. We have designed an integrated cross-disciplinary learning experience for students interested in the complex, real-world dilemmas encountered in practice. The readings and activities will emphasize ethical, legal, moral and spiritual issues and principles for practice within the context of communicating in interprofessional teams.

IPE 490. Special Topics in Health and Human Services

Credits 0.00 - 4.00 PeopleSoft Course ID 011185 Grading Basis GRD

This course involves topics of special interest in the area of health and human services but is open to all students. The focus of specific courses is identified for specific offerings. Courses are offered based on faculty and student interest.

Interscience Research

ISCI 101. Physics, Chemistry & the Human Experience [C3PP]

Credits 3.00 PeopleSoft Course ID 004995 Grading Basis GRD

A survey of the fundamental concepts, principles and ideas of chemistry and physics. Particular emphasis is placed on understanding the development of the principles and their application in understanding the world around us. May be used for general education credit. **Prerequisite(s):** *One of the following: MATH 103, MATH 107, MATH 205, MATH 231 or MATH 235.*

Corequisite(s): *One of the following: MATH 103, MATH 107, MATH 205, MATH 220, MATH 231 or MATH 235.*

ISCI 101H. Physics, Chemistry and the Human Experience - Honors [C3PP]

Credits 3.00 PeopleSoft Course ID 010487 Grading Basis GRD

A survey of fundamental scientific ideas and principles, and ideas of chemistry and physics. Particular emphasis is placed on understanding the development of these principles and their application in understanding the world around us. May be used for general education credit. Honors course. **Prerequisite(s):**

Honors Students

ISCI 104. Scientific Perspectives [C3L]

Credits 1.00 PeopleSoft Course ID 005146 Grading Basis GRD

A study of topics selected to allow students to participate in mathematical and scientific problem solving approaches to knowledge. May be used for general education credit. **Prerequisite(s):** *As indicated on MyMadison.* **Corequisite(s):** *As indicated on MyMadison.*

ISCI 104H. Scientific Perspectives - Honors [C3T1L]

Credits 1.00 PeopleSoft Course ID 005310 Grading Basis GRD

A study of topics selected to allow students to participate in scientific problem-solving approaches to knowledge. Prerequisite or corequisite as indicated in the schedule of classes. Honors course.

ISCI 171. Earth and Planetary Science for Teachers [C3NS]

Credits 3.00 PeopleSoft Course ID 013578 Grading Basis GRD

This course provides university-level foundations of earth and planetary science for future pk-8 teachers. Content aligns with various teacher competencies, and includes such topics as the formation and evolution of the earth and the earth's solar system, the characteristics of stars, planets, asteroids, and comets, and how earth and planetary science knowledge and technologies function with social context. Hands-on, experiential inquiry will be integrated into the course, as will an exploration of such methods as observation, classification, comparison, measurement, data interpretation, mathematical analysis, inference, prediction and hypothesis testing. Normally open to IDLS majors only, but other students may request admission by special permission. May be used for general education credit.

ISCI 172. Physical Science for Teachers [C3PP]

Credits 3.00 PeopleSoft Course ID 013579 Grading Basis GRD

This course provides university-level foundations of physical science for future pk- 8 teachers. Content aligns with various teacher competencies, and includes such topics as matter, conservation of mass and energy, chemical structures and bonds, coordinate systems and their use in describing motion and force, thermodynamics, light, sound, magnetism and electricity, and how physical science knowledge and technologies function with social context. Hands-on, experiential inquiry will be integrated into the course, as will an exploration of such methods as observation, classification, comparison, measurement, data interpretation, mathematical analysis, inference, prediction and hypothesis testing. Normally open to IDLS majors only, but other students may request admission by special permission. May be used for general education credit.

ISCI 173. Life and Environmental Science for Teachers [C3L]

Credits 3.00 PeopleSoft Course ID 013580 Grading Basis GRD

This course provides university-level foundations of life science for future preK-8 teachers. Content aligns with various teacher competencies, and will prepare students to be scientifically literate. Topics will focus on biological structure and function; information flow, storage and exchange; transformations of energy and matter; evolution; and the interconnection and interactions of living systems. The course will engage students in the learning of foundational concepts as well as the process of science and the relevance of biology to society. Normally open to IDLS majors only, but other students may request admission by special permission. May be used for general education credit.

ISCI 450A. Interscience Research

Credits 1.00 - 4.00 PeopleSoft Course ID 005102 Grading Basis GRD

Repeatable repeatable to 6 credits.

An investigative experience spanning more than one field of science which may require supervision by multiple faculty members from different disciplines. Students must get prior approval for this course from each of the supervising faculty members and the department head of their program. **Prerequisite(s):** *Junior status and permission of the instructors.*

ISCI 499H. Honors

Credits 1.00 - 4.00 PeopleSoft Course ID 013407 Grading Basis GRD

An independent research topic initiated and completed by qualified senior majors who want to graduate with distinction.

Italian

ITAL 101. Elementary Italian I

Credits 3.00 - 4.00 PeopleSoft Course ID 001891 Grading Basis GRD

The fundamentals of Italian through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. If student has had two or more years of the language in high school he/she will not receive credit for the course.

ITAL 101F. Elementary Italian-Florence**Credits 3.00 PeopleSoft Course ID 011189 Grading Basis GRD**

The fundamentals of Italian through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. If student has had two or more years of the language in high school he/she will not receive credit for the course.

Prerequisite(s): *Studies Abroad-Florence*

ITAL 102. Elementary Italian II**Credits 3.00 - 4.00 PeopleSoft Course ID 007459 Grading Basis GRD**

The fundamentals of Italian through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. If student has had two or more years of the language in high school he/she will not receive credit for the course.

Prerequisite(s): *ITAL 101.*

ITAL 102F. Elementary Italian II**Credits 3.00 PeopleSoft Course ID 011223 Grading Basis GRD**

The fundamentals of Italian through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. If student has had two or more years of the language in high school he/she will not get credit for the course. **Prerequisite(s):** *ITAL 101 Studies Abroad in Florence.*

ITAL 103. Italian Survival Kit I**Credits 4.00 PeopleSoft Course ID 014149 Grading Basis GRD**

This course provides students with basic communication skills for survival while traveling/studying in Italy. Emphasis on cultural competence and interaction skills. Does not fulfill the B.A. language requirement. Students who have previously studied Italian are required to take the placement test.

Prerequisite(s): *Senior standing or permission of the instructor.*

ITAL 109. Accelerated Review of Elementary Italian**Credits 3.00 PeopleSoft Course ID 013281 Grading Basis GRD**

Reviews elementary Italian grammar, reading, writing, speaking and listening skills in Italian. One hour of work a week in the language laboratory. For students who have had no more than two or three years of Italian in high school or qualify through the placement exam.

ITAL 111. Intensive Italian**Credits 6.00-8.00 PeopleSoft Course ID 011410 Grading Basis GRD**

The fundamentals of Italian through listening, speaking, reading and writing. The course is the equivalent of ITAL 101-102.

ITAL 212. Intensive Italian**Credits 6.00 PeopleSoft Course ID 011411 Grading Basis GRD**

The fundamentals of Italian through listening, speaking, reading, and writing. The course is the equivalent of ITAL 231-232.

ITAL 231. Intermediate Italian I**Credits 3.00 PeopleSoft Course ID 004039 Grading Basis GRD**

A thorough review of grammar, vocabulary building, conversation, composition and reading. **Prerequisite(s):** *ITAL 102, ITAL 109, ITAL 111 or Departmental Permission*

ITAL 231F. Intermediate Italian-Florence I**Credits 3.00 PeopleSoft Course ID 011190 Grading Basis GRD**

A thorough review of grammar, vocabulary building, conversation, composition and reading. **Prerequisite(s):** *ITAL 102, 109, 111 or per placement exam score.*

ITAL 232. Intermediate Italian II**Credits 3.00 PeopleSoft Course ID 007844 Grading Basis GRD**

A thorough review of grammar, vocabulary building, conversation, composition and reading. **Prerequisite(s):** *ITAL 231*

ITAL 232F. Intermediate Italian-Florence II**Credits 3.00 PeopleSoft Course ID 011191 Grading Basis GRD**

A thorough review of grammar, vocabulary building, conversation, composition and reading. **Prerequisite(s):** *Studies Abroad-Florence*

ITAL 300. Italian Grammar and Communication**Credits 3.00 PeopleSoft Course ID 005421 Grading Basis GRD**

Intensive training in grammatical structures and their application to oral and written communication. Instruction is in Italian. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** *ITAL 232 or ITAL 212 or Per Placement Exam Score*

ITAL 300F. Grammar and Communication**Credits 3.00 PeopleSoft Course ID 011192 Grading Basis GRD**

Intensive training in the use and comprehension of everyday Italian with emphasis on conversation and composition to give students confidence to express themselves in idiomatic Italian. Taught in Italian. **Prerequisite(s):** *Studies Abroad-Florence*

ITAL 307. History of Italian Culture and Society**Credits 3.00 PeopleSoft Course ID 000294 Grading Basis GRD**

In this course, students will study the history and the arts of Italy from the Etruscans to 1814. Instruction is in Italian. **Prerequisite(s):** *ITAL 300 or permission of instructor.*

ITAL 308. Contemporary Italian History and Culture

Cross listed with: HIST 308.

Credits 3.00 PeopleSoft Course ID 006281 Grading Basis GRD

A study of Italian society, economics, politics and the arts from 1814 to the present. Instruction in English. (Research papers for Italian majors/minors in the language).

ITAL 315. Italian Phonetics**Credits 3.00 PeopleSoft Course ID 011790 Grading Basis GRD**

Intensive drill in Italian sounds and intonation patterns. Instruction is in Italian. **Prerequisite(s):** *ITAL 300.*

ITAL 317. Strategies for Italian Oral Communication**Credits 3.00 PeopleSoft Course ID 013309 Grading Basis GRD**

In this course students will develop linguistic competencies and learn basic tools to improve their oral communication skills. **Prerequisite(s):** *ITAL 232*

ITAL 320. Oral and Written Communication**Credits 3.00 PeopleSoft Course ID 000980 Grading Basis GRD**

Intensive training in the use of modern, everyday Italian with emphasis on conversation and composition. Readings in Italian will provide a context for discussion and writing. **Prerequisite(s):** *ITAL 300 or permission of instructor*

ITAL 320F. Oral and Written Communication**Credits 3.00 PeopleSoft Course ID 008484 Grading Basis GRD**

Intensive training in the use and comprehension of everyday Italian with emphasis on conversation and composition to give students confidence to express themselves in idiomatic Italian. Taught in Italian. **Prerequisite(s):** *Studies Abroad-Florence*

ITAL 330. Business Italian**Credits 3.00 PeopleSoft Course ID 000558 Grading Basis GRD**

A study of commercial and technical vocabulary and trade customs in conjunction with practice in the art of commercial communication, including

interviews, letter writing and simultaneous interpretation. Instruction is in Italian. **Prerequisite(s):** *ITAL 300 or permission of instructor*

ITAL 335. Introduction to Italian Literature

Credits 3.00 PeopleSoft Course ID 010106 Grading Basis GRD

A survey of Italian literature from its beginning to the late 18th century. Textual analysis of sample writings representative of the most important literary movements. Instruction is in Italian. **Prerequisite(s):** *ITAL 300 or permission of instructor*

ITAL 375. Business and Society in Italy

Credits 3.00 PeopleSoft Course ID 011791 Grading Basis GRD

This course studies Italian Business, Economy, Politics, and the influence the Italian society has on them. **Prerequisite(s):** *ITAL 300 or permission of instructor*

ITAL 380. Italian Language and Culture Through Regional Cuisine

Credits 3.00 PeopleSoft Course ID 013135 Grading Basis GRD

This course is designed to introduce the student to the rich Italian culinary tradition. Through readings and presentations, students will familiarize themselves with the diversity present in Italian cuisine and prepare the dishes that best represent various regions of Italy. Taught in Italian.

Prerequisite(s): *ITAL 300 or permission of instructor*

ITAL 386. Italian Short Stories

Credits 3.00 PeopleSoft Course ID 013924 Grading Basis GRD

A study of literary Italian short stories from the Middle Ages to the 21st century, including a selection of texts by prominent authors such as Giovanni Boccaccio, Giambattista Basile, Giovanni Verga, Grazia Deledda, Gabriele D'Annunzio, Luigi Pirandello, Natalia Ginzburg, Italo Calvino, and Ada Negri.

Prerequisite(s): *ITAL 300 or the permission of the instructor*

ITAL 397. Creative Writing in Italian

Credits 3.00 PeopleSoft Course ID 011794 Grading Basis GRD

This course will develop strategies both for writing well and for writing creatively. Another opportunity to practice speaking skills. **Prerequisite(s):** *ITAL 300 or permission of instructor*

ITAL 400. Advanced Conversation

Credits 3.00 PeopleSoft Course ID 011795 Grading Basis GRD

Discussions deal with topics of current interest. Instruction is in Italian.

Prerequisite(s): *ITAL 300.*

ITAL 410. Italy Through Broadcast and Print Media

Credits 3.00 PeopleSoft Course ID 012156 Grading Basis GRD

This course is an analysis of modern Italy through television, radio, newspapers, the internet, and commercial advertisement. Instruction is in Italian. **Prerequisite(s):** *ITAL 300 or permission of instructor.*

ITAL 421. A Study of Italian Theatre

Credits 3.00 PeopleSoft Course ID 013925 Grading Basis GRD

A study of Italian theatre from the Renaissance to the 21st century, including a selection of texts by prominent authors such as Niccolò Machiavelli, Torquato Tasso, Carlo Goldoni, Alessandro Manzoni, Luigi Pirandello and Dario Fo.

Prerequisite(s):

ITAL 300 or the permission of the instructor.

ITAL 422. A Study of Italian Poetry

Credits 3.00 PeopleSoft Course ID 013926 Grading Basis GRD

A study of Italian poetry from the Middle Ages to the 21st century, including a selection of texts by prominent authors such as Dante Alighieri, Francesco Petrarca, Ludovico Ariosto, Gaspara Stampa, Torquato Tasso, Ugo Foscolo, Giacomo Leopardi, Giovanni Pascoli, Giuseppe Ungaretti, Eugenio Montale,

Mario Luzi, and Alda Merini. **Prerequisite(s):** *ITAL 300 or the permission of the instructor*

ITAL 423. A Study of Italian Prose Fiction

Credits 3.00 PeopleSoft Course ID 013928 Grading Basis GRD

A study of Italian prose fiction from the Middle Ages to the 21st century, including a selection of texts by prominent authors such as Giovanni Boccaccio, Alessandro Manzoni, Primo Levi, Giuseppe Tomasi di Lampedusa, Elsa Morante, Italo Calvino Umberto Eco, and Elena Ferrante. **Prerequisite(s):** *ITAL 300 or the permission of the instructor*

ITAL 425. Modern Italian Literature

Credits 3.00 PeopleSoft Course ID 005644 Grading Basis GRD

A study of the works of major Italian writers from the 19th century to the present. Instruction is in Italian. **Prerequisite(s):** *ITAL 300 or permission of instructor.*

ITAL 435. Translation Strategies

Credits 3.00 PeopleSoft Course ID 010619 Grading Basis GRD

In this course, translation will be practiced as the 5th foreign language skill and will also be used as a pedagogic tool in language learning. A general and brief theoretical study will provide students with an understanding of what is involved in the translation process. The main focus of the course will be practical, from a brief review of the main translation strategies to the practice of different types of translation. Students learn how to use the main translation strategies, different types of translations and interpretation, and translation to develop and improve linguistic and cultural competences in Italian. **Prerequisite(s):** *ITAL 300 or permission of instructor.*

ITAL 437. Studies in Italian Literature

Cross listed with: *ENG 437*

Credits 3.00 PeopleSoft Course ID 011078 Grading Basis GRD

A study of selected works of Italian literature. Instruction is in English. May be repeated for credit when content varies.

ITAL 446. Special Topics in Italian Literature

Credits 3.00 PeopleSoft Course ID 011907 Grading Basis GRD

Study of a particular topic in Italian literature. It may cover all or specific Italian literature genre. Course may be repeated if content varies.

Prerequisite(s): *ITAL 300 or permission of instructor.*

ITAL 447. Special Topics in Italian Culture

Credits 3.00 PeopleSoft Course ID 012664 Grading Basis GRD

Students will study a particular topic in the culture of Italy. Course may be repeated if content varies. **Prerequisite(s):** *ITAL 300.*

ITAL 448. Special Topics in Italian Linguistics

Credits 3.00 PeopleSoft Course ID 012667 Grading Basis GRD

Students will study a particular topic in Italian linguistics. Topics could include an introduction to Italian sociolinguistics and psycholinguistics. Course may be repeated if content varies. **Prerequisite(s):** *ITAL 300.*

ITAL 465. Italian Cinema

Credits 3.00 PeopleSoft Course ID 000088 Grading Basis GRD

A study of Italian cinema from the early days to the present, with a focus on its relation to key features of Italian history, society, and cultures. Instruction is in Italian. **Prerequisite(s):** *ITAL 300 or permission of instructor.*

ITAL 480. Advanced Italian Language Lab

Credits 1.00-2.00 PeopleSoft Course ID 013927 Grading Basis GRD

This language lab is aimed at complementing 300- and 400-level Italian content courses. In addition to enrolling into each upper-level content course, students may be required to enroll in the correspondent advanced language lab. The language lab may be taught by the same instructor of the content

course or by a different instructor. In the language lab, the students will work on the linguistic component of the course by practicing reading advanced literary/specialized texts in the target language and speaking and/or writing about the contents of the course. The lab will focus on technical/literary lexicon, advanced grammar, and pragmatic and stylistic features.

Prerequisite(s): *ITAL 300 or permission of the instructor.*

ITAL 484. Advanced Studies in Spanish and Italian Literature

Credits 3.00 PeopleSoft Course ID 014237 Grading Basis GRD

From the Renaissance to the Siglo de Oro, this course will explore the influences between Spanish and Italian literature, from the Early modern period to the Baroque. It will mainly investigate three main genres: Poetry, narrative and drama. It will include a selection of texts by prominent Italian and Spanish authors such as Petrarch, Boccaccio, Garcilaso de la Vega, Machiavelli, Cervantes, Lope de Vega. Instruction is in English. **Prerequisite(s):** *Permission of the instructor.*

ITAL 490. Special Studies in Italian

Credits 1.00 - 4.00 PeopleSoft Course ID 009027 Grading Basis GRD

ITAL 490F. Special Studies in Italian

Credits 3.00 PeopleSoft Course ID 010459 Grading Basis GRD

Prerequisite(s): *Studies Abroad-Florence*

ITAL 499A. Senior Honors Project

Credits 1.00 PeopleSoft Course ID 011767 Grading Basis GRD

ITAL 499B. Senior Honors Project

Credits 3.00 PeopleSoft Course ID 011768 Grading Basis GRD

ITAL 499C. Senior Honors Project

Credits 2.00 PeopleSoft Course ID 011769 Grading Basis GRD

Japanese

JAPN 101. Elementary Japanese I

Credits 4.00 PeopleSoft Course ID 011414 Grading Basis GRD

The fundamentals of Japanese through listening, speaking, reading, and writing. Practice in pronunciation and development of comprehension. One hour of work each week in the language laboratory.

JAPN 102. Elementary Japanese II

Credits 4.00 PeopleSoft Course ID 011415 Grading Basis GRD

The fundamentals of Japanese through listening, speaking, reading, and writing. Practice in pronunciation and development of comprehension. One hour of work each week in the language laboratory. If student has had two or more years of the language in high school he/she will not receive credit for the course. **Prerequisite(s):** *JAPN 101.*

JAPN 111. Intensive Japanese I

Credits 6.00 PeopleSoft Course ID 013109 Grading Basis GRD

The fundamentals of Japanese through listening, speaking, reading and writing. The course is the equivalent of JAPN 101-102.

JAPN 212. Intensive Japanese II

Credits 6.00 PeopleSoft Course ID 013110 Grading Basis GRD

The fundamentals of Japanese through listening, speaking, reading and writing. The course is the equivalent of JAPN 231-232. **Prerequisite(s):** *JAPN 102 or permission of instructor.*

JAPN 231. Intermediate Japanese I

Credits 3.00 PeopleSoft Course ID 011416 Grading Basis GRD

A thorough review of grammar, vocabulary building, conversation, composition, and reading. A student cannot earn credit for JAPN 231 after completing JAPN 232. **Prerequisite(s):** *JAPN 102, JAPN 111, or permission of the instructor.*

JAPN 232. Intermediate Japanese II

Credits 3.00 PeopleSoft Course ID 011417 Grading Basis GRD

A thorough review of grammar, vocabulary building, conversation, composition, and reading. **Prerequisite(s):** *JAPN 231 or permission of instructor.*

JAPN 300. Japanese Grammar and Communication

Credits 3.00 PeopleSoft Course ID 012458 Grading Basis GRD

Intensive training in grammatical structures and their application to oral and written communication. Instruction is in Japanese. Fulfills the College of Arts and Letters writing-intensive requirement for possible International Affairs majors and/or IBUS majors. **Prerequisite(s):** *JAPN 232 or JAPN 212.*

JAPN 320. Japanese Oral and Written Communications

Credits 3.00 PeopleSoft Course ID 013052 Grading Basis GRD

Intensive training in the use of modern, everyday Japanese with emphasis on conversation and composition. Readings in Japanese will provide a context for discussion and writing. Instruction is in Japanese. **Prerequisite(s):** *JAPN 231 or permission of the instructor.*

JAPN 340. Practical Japanese Conversation

Credits 3.00 PeopleSoft Course ID 014421 Grading Basis GRD

This course will focus on improving students' verbal communication skills in Japanese. Students will learn and practice basic skills necessary in dealing with various practical situations by expressing their thoughts while engaging in dialogues in Japanese with others. Students will use the vocabulary, expressions and grammatical points covered in previous Japanese language courses. New vocabulary, expressions and grammatical points as well as some basic communication strategies in conversations (asking for clarification of the meaning of what someone said, showing the listener that one is thinking, etc.) will also be introduced as needed. In the process, students will learn to speak in a proper manner in Japanese society. They will also be directed to pay more attention to speaking Japanese with proper speed and pronunciation compared to lower-level classes. **Prerequisite(s):** *JAPN 212, JAPN 232 or permission of the instructor.*

JAPN 446. Special Topics in Japanese Literature

Credits 3.00 PeopleSoft Course ID 013774 Grading Basis GRD

Study of a particular topic in Japanese literature. It may cover all or a specific Japanese literature genre. Course may be repeated if content varies.

Prerequisite(s): *JAPN 300 and permission of the instructor.*

JAPN 447. Special Topics in Japanese Culture

Credits 3.00 PeopleSoft Course ID 013775 Grading Basis GRD

Students will study a particular topic in the culture of Japan. Course may be repeated if content varies.

JAPN 448. Special Topics in Japanese Linguistics

Credits 3.00 PeopleSoft Course ID 013776 Grading Basis GRD

Students will study a particular topic in Japanese linguistics. Topics could include an introduction to Japanese sociolinguistics or psycholinguistics. Course may be repeated if content varies. **Prerequisite(s):** *JAPN 300*

JAPN 490. Special Studies in Japanese

Credits 1.00 - 4.00 PeopleSoft Course ID 013011 Grading Basis GRD

Special topics or independent studies in Japanese.

Justice Studies

JUST 100. Justice Studies Proseminar

Credits 1.00 PeopleSoft Course ID 011440 Grading Basis CNC

This course is designed to help justice studies majors explore opportunities for internships, careers, graduate and professional education, and civic and community engagement. The course focuses on developing skills in resume writing, interviewing and networking techniques, job and internship search skills, and investigating graduate and law school opportunities.

Prerequisite(s): *JUST 200 and junior or senior status, or by permission.*

JUST 200. Introduction to Justice Studies**Credits 3.00 PeopleSoft Course ID 011441 Grading Basis GRD**

This course introduces students to the justice studies major and the interdisciplinary field of justice studies. Students will explore classical and contemporary conceptions and theories of justice and their application to public issues as well as broad and holistic approaches to justice including social, global and criminal justice. **Prerequisite(s):** *Justice studies majors only.*

JUST 210. Crime and Criminal Justice**Credits 3.00 PeopleSoft Course ID 011796 Grading Basis GRD**

This course provides an introduction to the nature of the crime problem in the United States, including patterns of victimization and offending and the ways in which the criminal justice system responds to these behaviors. **Prerequisite(s):** *Justice studies majors and criminal justice minors only; for justice studies majors: JUST 200 and admission to the major; for criminal justice minors: admission to the minor.*

JUST 212. Theories of Crime and Criminal Justice**Credits 3.00 PeopleSoft Course ID 011798 Grading Basis GRD**

This course provides an in-depth exploration of theoretical perspectives pertaining to the two central realms of criminological inquiry: crime and the response to crime (criminal justice). Both classic and contemporary perspectives are examined. The course will examine why people commit crime, why crime occurs, why it differs across groups and the objectives underlying crime control policy. **Prerequisite(s):** *Justice studies major: JUST 200. Criminal justice minors: JUST 210 or CRJU 215.*

JUST 221. Social Justice Theories**Credits 3.00 PeopleSoft Course ID 011797 Grading Basis GRD**

This course serves as a theoretical introduction to the social justice track of the Justice Studies major. It includes an examination of the major concepts regarding inequality. How do we define and create inequality? Can we rid ourselves of inequality or should we accept it as a necessary element in society? **Prerequisite(s):** *JUST 200.*

JUST 223. Social Justice Interventions and Policies**Credits 3.00 PeopleSoft Course ID 011814 Grading Basis GRD**

This class provides a review of the general structures of American social justice interventions and policies including governmental, corporate, and not-for-profit organizations. Emphasis will be placed on macro-structures such as entitlement programs and micro-structures such as neighborhood and grassroots organization. **Prerequisite(s):** *JUST 200.*

JUST 225. Justice and American Society [C4AE]**Credits 4.00 PeopleSoft Course ID 012071 Grading Basis GRD**

This course introduces the student to the concept and reality of justice in America. It is a broad-based, interdisciplinary consideration of justice: What it is, what it means, and how it intersects with society and social institutions in American. Philosophical and theoretical underpinnings of the notion of justice and the historical context of justice in American society will be considered. May be used for general education credit. May not be used for major credit.

JUST 235. Justice in the Global Community**Cross listed with:** *JUST 235H***Credits 3.00 PeopleSoft Course ID 011813 Grading Basis GRD**

A survey of different definitions of justice relating to the operation and development of a global community in international affairs. **Prerequisite(s):** *JUST 200.*

JUST 235H. Justice in the Global Community**Cross listed with:** *JUST 235***Credits 3.00 PeopleSoft Course ID 011813 Grading Basis GRD**

A survey of different definitions of justice relating to the operation and development of a global community in international affairs. **Prerequisite(s):** *Honors Students*

JUST 237. Dilemmas in Global Justice**Credits 3.00 PeopleSoft Course ID 013950 Grading Basis GRD**

This course applies the concepts and frameworks of global justice to examine a selection of the world's greatest challenges, placing global affairs in historical, geographical and political contexts. **Prerequisite(s):** *JUST 200.*

JUST 300. Perspectives On Comparative Justice**Credits 3.00 PeopleSoft Course ID 011443 Grading Basis GRD**

This course provides an overview of the various systems of justice existent in different cultures throughout the globe. The emphasis here is on legal systems and the ways in which they are used to promote--or not promote--justice. The course also includes a discussion of such topics as war, peace, terrorism, political and social oppression and the ways in which these phenomena are either created by or ameliorated by justice systems. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 301. Advanced Level Special Topics in Justice Studies**Credits 3.00 PeopleSoft Course ID 011444 Grading Basis GRD**

This course provides an examination of topics which are of current interest in the field of justice studies. The class may be repeated for credit when course content changes. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 307. Justice and Crime**Credits 3.00 PeopleSoft Course ID 013932 Grading Basis GRD**

The purpose of this course is to provide a critical and interdisciplinary examination of the relationship between justice and criminal behavior. Drawing from social psychology and criminology, this course will examine various conceptions of justice, the implications that (in)justice has for the perpetration of crime and how principles of justice operate in the criminal justice system. In addition, this course will briefly investigate miscarriages of justice and the implications they have for offending behavior. **Prerequisite(s):** *Justice studies major or criminal justice minor; for justice studies majors: JUST 200 and one other 200-level JUST course, excluding JUST 225; for criminal justice minors: JUST 210 or CRJU 215; or permission of instructor.*

JUST 308. Social Psychology of Justice**Credits 3.00 PeopleSoft Course ID 014563 Grading Basis GRD**

This course examines various pressing social problems including, but not limited to, lethal policing, hate crimes, racial profiling and prejudice to illustrate how social psychology affects our understanding of justice. Students will examine how others - ranging from small friendship groups to entire societies - affect an individual and how the individual affects others by learning about various social psychological concepts, such as attributions of blame, stereotypes, attitudes, conformity and altruism. Throughout the course, students will identify the implications individual perceptions and interactions with others have for justice, crime, criminal justice and social justice.

Prerequisite(s): *JUST 200 and one other 200-level JUST course, excluding JUST 225.*

JUST 309. Global Crime**Credits 3.00 PeopleSoft Course ID 013940 Grading Basis GRD**

This course explores crimes of the powerful from a global criminological perspective by examining historical and current cases of governmental, corporate and political crime. The complex relationships that will be investigated include how the interests of states, corporations and international financial institutions intersect in the commission of different types of global

crimes. **Prerequisite(s):** *Justice studies major or criminal justice minor; for justice studies majors: JUST 200 and one other 200-level JUST course, excluding JUST 225; for criminal justice minors: JUST 210 or CRJU 215; or permission of instructor.*

JUST 311. Women, Crime and Criminal Justice

Credits 3.00 PeopleSoft Course ID 013941 Grading Basis GRD

This class provides an overview of the ways in which women are involved in the phenomenon of crime: as victims, as offenders and as employees in the criminal justice system. **Prerequisite(s):** *Justice studies major or criminal justice minor; for justice studies majors: JUST 200 and one other 200-level JUST course, excluding JUST 225; for criminal justice minors: JUST 210 or CRJU 215; or permission of instructor.*

JUST 312. Mass and Serial Murder

Credits 3.00 PeopleSoft Course ID 014327 Grading Basis GRD

This course will critically examine the phenomenon of multicide in society, including mass, serial and spree murder. This course will include: analyzing historical and contemporary examples of multicide; investigating the biological, psychological and sociological correlates of multicide offending; and examining media constructions and assessing their impact on public perceptions.

Prerequisite(s): *For Justice Studies majors: JUST 200 and one other 200-level JUST course, excluding JUST 225. For Criminal Justice minors: JUST 210 OR CRJU 215.*

JUST 316. Human Development and Crime

Cross listed with: PSYC 316

Credits 3.00 PeopleSoft Course ID 011453 Grading Basis GRD

This course examines how psychological research and theory shed light on the development of criminal careers, the factors that protect children and adolescents from becoming criminals, how being a victim of crime influences well-being, and the efficacy of rehabilitation. Special attention will be paid to the knowledge base on delinquency and childhood/adolescent victimization.

Prerequisite(s): *PSYC 101; For justice studies majors: JUST 200 and one additional 200 level JUST course, excluding JUST 225. For Criminal Justice minors: JUST 210 or CRJU 215. For Youth Justice minors: YTHJ 300.*

JUST 317. Victimization of Children

Credits 3.00 PeopleSoft Course ID 012184 Grading Basis GRD

This course provides an overview of patterns, causes and remedies for the various victimizations of children in the United States and throughout the world (abductions, child abuse, sexual exploitation, etc.). **Prerequisite(s):** *Justice studies major, criminal justice minor or youth justice minor; for justice studies majors: JUST 200 and one other 200 level JUST course, excluding JUST 225; for criminal justice minors: JUST 210 or CRJU 215; for Youth Justice minors: YTHJ 300; or permission of instructor.*

JUST 318. Sex Offenders

Credits 3.00 PeopleSoft Course ID 012411 Grading Basis GRD

This course is designed to introduce students to the issue of sex offenders in society. Students will consider sexual values in American society and how they relate to the development, thought patterns and behavior of individuals who sexually violate others. Students will learn about theories of sex offending, the effects of sex offending on victims and society, and strategies for treating and managing sex offenders. **Prerequisite(s):** *Justice studies major or criminal justice minor; for justice studies majors: JUST 200 and one other 200 level JUST course, excluding JUST 225; for criminal justice minors: JUST 210 or CRJU 215; or permission of instructor.*

JUST 320. Organized Crime

Credits 3.00 PeopleSoft Course ID 013012 Grading Basis GRD

This course is designed to give an overview of issues associated with Organized Crime. Organized Crime is an increasingly global phenomenon, and as such the class focuses not only on the situation in the United States, but the rest of the world as well. Attention is also given to the 'businesses' of organized crime (e.g., drug trafficking, counterfeiting), the law enforcement responses to Organized Crime, and the role/depiction of Organized Crime in popular culture.

Prerequisite(s): *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 322. Understanding Violence and Nonviolence

Credits 3.00 PeopleSoft Course ID 011812 Grading Basis GRD

This course is organized around better understanding the complex dimensions of both violence and nonviolence. Is violence (sometimes) necessary? Is nonviolence naïve? Is one approach more effective than another? When? Where? Why? How are these related to justice? This course will critically examine these different approaches to dealing with social conflict and social change, with special emphasis on comparing the motivations, dynamics and outcomes of these two approaches. We will examine both theoretical and applied approaches from a wide assortment of writers and social interactions that deal with interpersonal, institutional and structural pathways to violence and/or nonviolence. The underlying assumption is that one cannot understand violence or nonviolence separately, because they are intimately connected.

Prerequisite(s): *JUST 200 and one other 200-level JUST course, excluding JUST 225.*

JUST 323. Comparative Criminal Justice

Credits 3.00 PeopleSoft Course ID 010633 Grading Basis GRD

A comparative study of criminal justice systems derived from the major world legal systems. The relevant background factors, government, laws, law enforcement, courts, corrections and youthful offenders are examined in each representative country studied. Multinational criminal justice organizations and special issues are addressed. **Prerequisite(s):** *Justice studies major or criminal justice minor. For justice studies majors: JUST 200 and one other 200 level JUST course, excluding JUST 225; for criminal justice minors: JUST 210; or permission of instructor.*

JUST 324. Death Penalty

Credits 3.00 PeopleSoft Course ID 011912 Grading Basis GRD

This course provides students with a broad survey of the death penalty as penal sanction and the controversies and issues which surround it. Key topical areas covered are history and foundations, legal landscape, execution and death penalty processes, contemporary issues including innocence, cost, discrimination and deterrence, and perspectives and voices surrounding the death penalty. **Prerequisite(s):** *Justice studies major or criminal justice minor; for justice studies majors: JUST 200 and one other 200 level JUST course, excluding JUST 225; for criminal justice minors: JUST 210 or CRJU 215; or permission of instructor.*

JUST 326. Victimology

Credits 3.00 PeopleSoft Course ID 011457 Grading Basis GRD

This course provides an overview of various perspectives (social, psychological, legal, etc.) on the experience of victimization. Explanations of the phenomenon are discussed in the context of responses to various types of victimization. **Prerequisite(s):** *Justice studies majors: JUST 200 and one additional 200 level JUST course, excluding JUST 225; Criminal Justice minors: JUST 210 or CRJU 215; or permission of instructor.*

JUST 327. Criminal Law

Credits 3.00 PeopleSoft Course ID 009056 Grading Basis GRD

Study of substantive criminal law including common law sources and elements of various criminal offenses, justification and defenses. **Prerequisite(s):** *Justice studies major or criminal justice minor only; justice studies majors: JUST 200 and one other 200 level JUST course, excluding JUST 225; for criminal justice minors: JUST 210 or CRJU 215; or permission of instructor.*

JUST 328. Race, Class and Justice

Credits 3.00 PeopleSoft Course ID 013585 Grading Basis GRD

This course provides students with an overview of contemporary justice issues in a comparative perspective. It includes an introduction to case-studies, comparative research methods and cross-national comparisons of justice issues concerning race and class. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 329. Perspectives on Law

Credits 3.00 PeopleSoft Course ID 012186 Grading Basis GRD

In this course, a broad array of perspectives on law and legal processes in the United States are examined. Students will examine perspectives from the realms of jurisprudence, philosophy, sociology, psychology, economics, anthropology and literature, among others, and will consider the intersection of these realms with law, legal processes, legal evolution and development, and the legal professions. **Prerequisite(s):** *Justice studies major or criminal justice minor; for justice studies majors: JUST 200 and one other 200 level JUST course, excluding JUST 225; for criminal justice minors: JUST 210 or CRJU 215; or permission of the instructor.*

JUST 330. Corrections

Cross listed with: SOWK 330

Credits 3.00 PeopleSoft Course ID 012193 Grading Basis GRD

This course examines the history, philosophy, policies and problems of the treatment of violators by the police, courts and correctional institutions.

Prerequisite(s): *For Justice Studies majors: JUST 200 and one other 200 level JUST course, excluding JUST 225; for Criminal Justice minors: JUST 210 or CRJU 215; or permission of instructor.*

JUST 331. Human Rights in Theory and Practice

Cross listed with: HUMN 331, POSC 331

Credits 3.00 PeopleSoft Course ID 011808 Grading Basis GRD

This course will explore the nature and value of human rights by investigating some major debates over their status and meaning, and by examining some of the ways people have tried to secure human rights in practice. **Prerequisite(s):** *Open to justice studies majors only. JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 334. Media and Justice

Cross listed with: SMAD 334

Credits 3.00 PeopleSoft Course ID 012908 Grading Basis GRD

This course will examine media constructions of justice. Students will be required to critically analyze the portrayal of justice issues in various media forms including television, internet and film. Attention will be given to the accuracy of such portrayals and whether they have any broader social implications in regard to how we view complex justice issues. **Prerequisite(s):** *For Justice Studies majors: JUST 200 and one other 200 level JUST course, excluding JUST 225; for Criminal Justice minors: JUST 210 or CRJU 215; or permission of instructor.*

JUST 339. Mapping Justice

Credits 3.00 PeopleSoft Course ID 013951 Grading Basis GRD

This course examines maps and practices of mapping to analyze distributions of justice and injustice across space. Using case studies, multimedia content and hands-on exercises spanning the fields of criminal, global and social

justice, students learn the fundamentals of geospatial analysis while designing their own digital maps and interactive web sites. **Prerequisite(s):** *JUST 200 and one other 200-level JUST course, excluding JUST 225.*

JUST 341. Gender and Justice

Cross listed with: WGSS 341

Credits 3.00 PeopleSoft Course ID 011915 Grading Basis GRD

This course is an interdisciplinary examination of the causes, structure and consequences of gender oppression. Consistent with the social justice track of the major, notions of fairness, justice, and equality with respect to gendered social, political and economic relations will be examined. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 343. Justice and Society

Credits 3.00 PeopleSoft Course ID 013337 Grading Basis GRD

This course focuses on the various intra- and interpersonal processes that underlie situations related to (in)justice at the individual and group levels. Theories, empirical research and real-world examples of social perception (e.g., prejudice and discrimination), social influence (e.g., attitudes, conformity) and social relations (e.g., altruism, aggression) related to (in)justice will be examined. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 345. Restorative Justice

Credits 3.00 PeopleSoft Course ID 012412 Grading Basis GRD

In this course, the restorative justice paradigm will be examined at multiple levels including consideration in the international, local community and criminal justice contexts. Both the underlying principles and practical applications of restorative justice will be explored. The related concept of community justice will also be addressed. **Prerequisite(s):** *Justice studies major, criminal justice minor or youth justice minor; for justice studies majors: JUST 200 and one other 200 level JUST course, excluding JUST 225; for criminal justice minors: JUST 210 or CRJU 215; Youth Justice minors: YTHJ 300; or permission of instructor.*

JUST 350. Justice and Globalization

Credits 3.00 PeopleSoft Course ID 013336 Grading Basis GRD

Globalization is the phenomenon of interconnectedness of economic, political and cultural activities across different parts of the globe. The class will survey several aspects of globalization through the lens of justice and injustice. Class time will be devoted to discussion and student presentations. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 351. Building Democracy

Credits 3.00 PeopleSoft Course ID 013586 Grading Basis GRD

This course will review historic and modern transitions to democracy, explore democracy as a 'just' form of government, examine correlates with its strengths and weaknesses, and provide an overview on how to build a quality democracy. **Prerequisite(s):** *JUST 200 and one track foundation course.*

JUST 352. Global Migration

Credits 3.00 PeopleSoft Course ID 014216 Grading Basis GRD

This course surveys human migration across the Earth, throughout history, and in relation to justice. Students analyze interdisciplinary academic literature on migration, settlement and diasporas while studying flows of people across various historical, geographical and political contexts, from prehistoric to contemporary and from global to local. **Prerequisite(s):** *JUST 200 and one other 200-level JUST course, excluding JUST 225.*

JUST 353. Justice and Development

Credits 3.00 PeopleSoft Course ID 013013 Grading Basis GRD

This course examines introduces the concept of justice as a standard for evaluating strategies for political, economic and social development in the contemporary international system. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 354. Native Justice and Resistance

Credits 3.00 PeopleSoft Course ID 014217 Grading Basis GRD

This course covers a wide array of topics relevant to the world's indigenous peoples including shared injustices and grievances, methods indigenous groups have taken to overcome justice inequalities, complexities of dual justice systems and the decolonization of legal and social systems. **Prerequisite(s):** *JUST 200 and one other 200-level JUST course.*

JUST 355. Solutions to Global Poverty

Credits 3.00 PeopleSoft Course ID 014251 Grading Basis GRD

This course will analyze the root causes of global poverty and critically examine a range of approaches designed to improve conditions for the world's poor. Topics include nutrition and agriculture, healthcare, education, gender equality, water and sanitation, environmental management, and microfinance. Throughout the course, students will read policy documents, work with poverty-related data and analyze a variety of real-world case studies to illustrate key ideas. **Prerequisite(s):** *JUST 200 and one other 200-level JUST class excluding JUST 225.*

JUST 356. Refugees and Humanitarian Response

Credits 3.00 PeopleSoft Course ID 014267 Grading Basis GRD

This course will examine the practical and ethical challenges facing refugees and humanitarian actors in the contemporary world. We will survey the causes of forced migration, explore global trends in displacement and humanitarian aid and analyze the laws and institutions that facilitate (or inhibit) refugee protection. We will consider the challenges that refugees face throughout their journey, from border crossings, to refugee camps, to resettlement communities, as well as the practical and ethical tradeoffs that humanitarian actors must weigh in providing assistance and protection. The course will include a community engagement component related to refugee resettlement in Harrisonburg. **Prerequisite(s):** *JUST 200 and one other 200-level JUST course, excluding JUST 225.*

JUST 357. Environmental Justice

Credits 3.00 PeopleSoft Course ID 013015 Grading Basis GRD

This course provides students with an interdisciplinary introduction to environmental justice. Emphasizing how contemporary environmental issues are profoundly rooted in social, political, and economic conditions, students will apply principles and conceptions of justice to ecological challenges and sustainability efforts in local, national, and global contexts. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 361. Terrorism

Credits 3.00 PeopleSoft Course ID 013587 Grading Basis GRD

This course is a survey of the evolution of the phenomenon of terrorism and an analysis of its causes, strategies and forms. This course also discusses the consequences of terrorism in terms of government responses to terrorist threats (homeland security and counter-terrorism) and the economic and political costs of such responses. An interdisciplinary approach linking history, sociology, criminology and political science is used to make sense of this multifaceted phenomenon. **Prerequisite(s):** *Justice studies major or criminal justice minor; for justice studies majors: JUST 200 and one other 200 level JUST course, excluding JUST 225; for criminal justice minors: JUST 210 or CRJU 215; or permission of instructor.*

JUST 365. Justice in Literature, Film and Art

Credits 3.00 PeopleSoft Course ID 013588 Grading Basis GRD

This class provides an opportunity for students to consider the ways in which issues related to the Justice fields are expressed in literature, film, and/or art and the ways in which such media may influence or create our conceptions of justice. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 372. Ethics and International Politics

Cross listed with: *POSC 372*

Credits 3.00 PeopleSoft Course ID 011805 Grading Basis GRD

This course investigates the significance of ethical questions in the theory and practice of contemporary international politics, introducing a variety of normative approaches that shape the issues of peace and conflict, morality and justice in global affairs. Practical case studies will also be used to address issues of policy relevance, with particular attention paid to the American experience. **Prerequisite(s):** *JUST, INTA and POSC majors only; JUST majors must have completed JUST 235.*

JUST 373. Rebuilding Post Conflict Societies

Credits 3.00 PeopleSoft Course ID 012911

This course examines the social, economic, security and political problems faced in rebuilding societies that are emerging from a period of intense and prolonged conflict. This course presents an overview of the scope of this multidimensional challenge as well as strategies that have been used to address them. In the course of doing so, evaluation standards are discussed that can be used to measure the success, failure and justness of the newly emerging political system. **Prerequisite(s):** *JUST 200 and one other 200-level JUST course, excluding JUST 225.*

JUST 374. War and Justice

Credits 3.00 PeopleSoft Course ID 012910 Grading Basis GRD

This course is an empirical and normative investigation of the relationship between war and justice. Empirically, it examines the causes of war and the ways in which wars end. From a normative perspective it raises the questions of when are wars just; how should a just war be fought; and what is a just peace. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 375. Genocide in the 20th Century

Credits 3.00 PeopleSoft Course ID 012192 Grading Basis GRD

This course is an interdisciplinary examination of the various definitions, causes, structure and consequences of genocide. We will study some of the major 20th century genocides (Indigenous peoples, Armenia, USSR, Jewish Holocaust, Cambodia, Bosnia/Kosovo, Rwanda, and Darfur) using the following conceptual schemes: social death, structural violence, oppression, and mass murder. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 376. Global Social Movements

Credits 3.00 PeopleSoft Course ID 013952 Grading Basis GRD

This course introduces justice studies students to the origins, development and outcomes of global social movements. It involves a comprehensive approach, which entails an in-depth examination of the main theories explaining the rise of social movements, as well as an empirical focus on global dynamics of popular mobilization. Special attention will be devoted to the examination of the global justice movement. **Prerequisite(s):** *JUST 200 and one other 200-level JUST course, excluding JUST 225.*

JUST 377. Global Futures

Credits 3.00 PeopleSoft Course ID 012615 Grading Basis GRD

Explores possible future directions that the global system may take in selected issue areas such as energy, democratization, food supplies, and infectious diseases. Emphasis is on active learning strategies, introducing the analytical tools used for analysis of international trends and addressing questions of how to respond in a manner that promotes global justice. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 385. Disability and Justice

Credits 3.00 PeopleSoft Course ID 013779 Grading Basis GRD

An interdisciplinary exploration of justice & disability which examines issues such as the historical and theoretical contexts of disability, the social and rhetorical construction of disability, disability legislation and public policy, disability and the criminal justice system, and disability rights movements and inclusion as they relate to larger civil and human rights movements in the US & globally. The course highlights the importance of disability in broader conversations about justice. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course, excluding JUST 225.*

JUST 386. Sexual Orientation, Law and Justice

Cross listed with: *WGSS 386.*

Credits 3.00 PeopleSoft Course ID 013942 Grading Basis GRD

This course explores considerations of justice in shaping law and policy related to sexual orientation. The concept of sexual orientation is a relatively recent development in academic, legal, medical and other policy contexts in the United States and globally. Topics addressed in the course include the dehumanization, criminalization, medicalization and oppression of sexual orientation minorities, and legal and regulatory interventions and movements for social justice, criminal justice reform and human rights. **Prerequisite(s):** *JUST 200 and one other 200-level JUST course, not including JUST 225.*

JUST 392. Peace Studies

Cross listed with: *POSC 392*

Credits 3.00 PeopleSoft Course ID 011458 Grading Basis GRD

A study of the evolution, theory and practice of peace studies. The course focuses on how we wage and resolve conflict, how we effect social change and how we provide for security through nonviolent means. **Prerequisite(s):** *JUST 200 and one other 200-level JUST course.*

JUST 397. Legal Research and Information Literacy

Credits 3.00 PeopleSoft Course ID 014360 Grading Basis GRD

This course will provide a thorough insight into how to study law. Students will acquire fundamental legal skills such as how to read a case and identify and differentiate ratio decidendi and obiter dicta, understand the codification of law in a common law jurisdiction, and learn how to accurately research legal topics utilizing and citing primary and secondary legal sources. The course will focus on domestic (U.S.) legal research, involving both state and federal jurisdictions, in addition to investigating international examples and legal instruments.

Prerequisite(s): *For justice studies majors: JUST 200 and one other 200-level JUST class, excluding JUST 225; for criminal justice minors: JUST 210 or CRJU 215.*

JUST 399. Justice Research Methods

Credits 4.00 PeopleSoft Course ID 011442 Grading Basis GRD

This course provides students with the tools necessary for conducting independent research in the area of Justice Studies. Both quantitative and qualitative methods are covered. A term project, in which the skills covered in the course are applied, is a significant part of the class. **Prerequisite(s):** *JUST 200, one other 200-level JUST course (excluding JUST 225), MATH 220 and one 300-level JUST course.*

JUST 400. Senior Seminar in Justice Studies

Credits 3.00 PeopleSoft Course ID 011445 Grading Basis GRD

This is the capstone course of the Justice Studies major. Students are expected to enter JUST 400 with a proposed area of study, and will spend the semester in developing a thesis. Class discussion and review of individual projects, along with oral presentation of work, are integral parts of the course. Students are expected to produce a piece of original scholarship related to their study in the major. **Prerequisite(s):** *JUST 200, JUST 399 and senior JUST major.*

JUST 401. Internship in Justice Studies

Credits 3.00 PeopleSoft Course ID 011446 Grading Basis GRD

In this course, students integrate professional experiences as interns with justice studies coursework. In addition to working with an agency or organization, students will produce academic work which examines the connections between their area of study and the context of the internship. By application only. **Prerequisite(s):** *JUST 200, JUST 399, minimum GPA (in major and cumulative) of 2.0, and permission of instructor.*

JUST 402. Advanced Research in Justice Studies

Credits 3.00 PeopleSoft Course ID 011447 Grading Basis GRD

This course is designed to give students a context in which to pursue advanced research in a Justice Studies context. It is especially appropriate for students interested in graduate study in the field. **Prerequisite(s):** *JUST 200, JUST 399 or permission of instructor.*

JUST 403. Nelson Institute Seminar

Credits 3.00 PeopleSoft Course ID 012912 Grading Basis GRD

Students enrolled in this course will be assigned to consider a contemporary problem Justice Studies. Working individually and in teams, students will first study the problem, and then propose workable solutions. **Prerequisite(s):** *Junior or Senior Standing Only*

JUST 404. Practicum in Community-Based Research

Credits 3.00 PeopleSoft Course ID 012913 Grading Basis GRD

This course provides students with an intensive, collaborative community-based research experience working in partnership with a community organization or group. Students will integrate and apply principles and conceptions of justice and methods of scholarly inquiry to a community-identified problem. This course may be taken only once for credit.

Prerequisite(s): *JUST 200, JUST 399 or permission of instructor.*

JUST 405. Research Assistantship in Justice Studies

Credits 1.00 - 3.00 PeopleSoft Course ID 013944 Grading Basis GRD

Students will work as research assistants under faculty supervision. Students may take this course only by invitation from a faculty member in justice studies and may register for this course only through departmental approval. No student may take more than three credits of JUST 405. **Prerequisite(s):** *JUST 200 and two other 200-level JUST courses, excluding JUST 225; one 300-level JUST course; invitation of the instructor; and permission of the department head.*

JUST 499. Honors

Credits 1.00 - 3.00 PeopleSoft Course ID 011897 Grading Basis GRD

Year course. An independent research topic initiated and completed by qualified majors wishing to graduate with distinction.

Kinesiology

KIN 100. Lifetime Fitness and Wellness (2,2) [C5W]

Credits 3.00 PeopleSoft Course ID 008686 Grading Basis GRD

This course is designed to help students adopt and maintain the behaviors associated with an active and healthy lifestyle. Through this course students will learn the importance of maintaining wellness through a physically active lifestyle. Through lectures and labs, students study and develop the behavioral

patterns consistent with the current knowledge base in fitness and wellness.
May be used for general education credit.

KIN 120. Mindfulness for Health and Wellness

Credits 1.00 PeopleSoft Course ID 014606 Grading Basis GRD

This course is designed to provide students with an introduction to formal and informal mindfulness practices. Students will study and practice multiple mindfulness techniques while building a personal resource pool to help develop a daily habit of mindfulness to increase overall personal wellness. Instructional methods will involve a combination of online lectures and applied exercises.

KIN 121. Flying Disc Sports

Credits 1.00 PeopleSoft Course ID 013328 Grading Basis CNC

This class will focus on various flying disc sports and activities. Participants will learn the skills and techniques, such as basic frisbee, freestyle frisbee, ultimate frisbee and disc golf, as well as the etiquette and rules of each activity.

KIN 122. Road Cycling

Credits 1.00 PeopleSoft Course ID 001106 Grading Basis CNC

The following courses provide basic instruction in the activities listed: 122, road cycling; 124, experiential adventure education; 125, tennis; 126, golf; 128, fencing; 129, badminton; 131, skiing; 133, bowling; 138, racquetball; 139, river canoeing; 140, swimming; 145, conditioning; 148, jogging; and 149, aerobic dance.

KIN 123. Mountain Cycling

Credits 1.00 PeopleSoft Course ID 001521 Grading Basis CNC

This course is designed for the student who has cycling skills and experiences but who has limited experience riding off-road. Emphasis is placed on bike handling, minimal impact trail riding skills, safety, fitness, basic maintenance and repair, and equipment selection.

KIN 124. Basic Rock Climbing and Experiential Activities

Credits 1.00 PeopleSoft Course ID 009052 Grading Basis CNC

This course provides a brief introduction to the sport of rock climbing. This course focuses on developing personal movement skills related to rock climbing and helps participants become familiar with various techniques for climbing slabs, faces, cracks, and overhangs. The Course includes basic rope management skills such as knot tying and belaying.

KIN 125. Basic Tennis

Credits 1.00 PeopleSoft Course ID 002843 Grading Basis CNC

This course is designed for students interested in developing knowledge and skill in tennis with instruction tailored to the level of ability. Beginners through intermediate/advanced levels of tennis experience are welcome. Classes focus on skill development/refinement (forehand, backhand, serve, etc.), strategy for singles and doubles, rules, terminology, and etiquette.

KIN 126. Basic Golf

Credits 1.00 PeopleSoft Course ID 007258 Grading Basis CNC

This course is designed for students interested in developing knowledge and skill in golf with instruction tailored to the level of ability. Beginners through intermediate/advanced levels of golf experience are welcome. Classes focus on skill development/refinement (full swing, putting, chipping, and pitching), rules, terminology, and etiquette. This course is held off-campus and students are responsible for transportation.

KIN 138. Racquetball

Credits 1.00 PeopleSoft Course ID 000483 Grading Basis CNC

Elementary level in specific individual sports: 122, cycling; 125, tennis; 126, golf; 127, archery; 128, fencing; 129, badminton; 131, skiing; 133, bowling; 138, racquetball.

KIN 149. Group Fitness

Credits 1.00 PeopleSoft Course ID 002518 Grading Basis CNC

Development and maintenance of cardiovascular and physical fitness through selected dance routines.

KIN 151. Swim Conditioning

Credits 1.00 PeopleSoft Course ID 007265 Grading Basis CNC

The following courses provide intermediate instruction in the activities listed:

151, swim conditioning; 152, lifesaving/lifeguarding; 156, scuba and skin diving; 161, intermediate skiing; 162, intermediate swimming; 163, intermediate tennis.

KIN 152. Lifesaving/Lifeguarding

Credits 1.00 PeopleSoft Course ID 001365 Grading Basis CNC

This course is designed to prepare individuals for lifeguard certification. Emphasis is placed on development of the skills and knowledge needed to prevent, recognize, and respond to aquatic emergencies. Participants will learn water rescues, professionalism and responsibilities as a lifeguard, to provide care for breathing and cardiac emergencies, injuries and sudden illnesses until emergency medical services (EMS) personnel take over.

KIN 156. Scuba and Skin Diving

Credits 1.00 PeopleSoft Course ID 004946 Grading Basis CNC

This course is designed for individuals with little or no SCUBA experience. The course included both classroom and water experiences emphasizing the skills of skin diving and scuba, along with the physiology of diving, first aid, and decompression.

KIN 157. Self-Defense for Women

Credits 1.00 PeopleSoft Course ID 003503 Grading Basis CNC

This course is designed to teach the basic principles and techniques of self-defense. Class time will be divided into both skill acquisition and discussions concerning safety and ways to avoid potentially dangerous situations.

KIN 159. Basic Aerobic Kickboxing

Credits 1.00 PeopleSoft Course ID 010882 Grading Basis CNC

Cardio Kickboxing is a non-contact aerobic conditioning activity combining punches, kicks, traditional aerobic skills, and fitness activities. The course is designed to enhance cardiovascular endurance, muscular strength, muscular endurance, and flexibility.

KIN 162. Intermediate Swimming

Credits 1.00 PeopleSoft Course ID 002608 Grading Basis CNC

This course is designed help students who are comfortable in the water achieve a health-enhancing level of physical fitness through swimming. Emphasis is placed on polishing individual skill with an emphasis on stroke development in front crawl and back crawl. In addition, proficiency in the breaststroke and sidestroke will be included along with an introduction to the butterfly, approach stroke, turns, surface dives and diving techniques.

KIN 170. Fitness Instructor Training

Credits 1.00 PeopleSoft Course ID 013329 Grading Basis CNC

The Fitness Instructor Training course gives the student the opportunity to obtain the basic skills and knowledge necessary to facilitate fitness related activities and programming. Lecture topics include the components of physical fitness, fitness assessment, muscular anatomy, exercise programming and nutrition. Each class will contain a lecture and practical component.

KIN 171. Basic Group Fitness Instructor Training

Credits 1.00 PeopleSoft Course ID 013330 Grading Basis CNC

Basic Group Fitness Instructor Training is designed to help the student lead a full group exercise class. Students will be given exercise/health/fitness information via lectures, handouts, assignments, and practical experience.

KIN 172. Group Fitness Instructor Training Mind Body**Credits 1.00 PeopleSoft Course ID 013331 Grading Basis CNC**

Group Fitness Instructor Training is designed to help the student experience the basics of Yoga and Pilates and develop basic instructional skills for these two areas. Standards taught in the course correspond to national standards and certifications. Students will be given exercise/health/fitness information via lectures, handouts, assignments, and practical experience.

KIN 173. Intro to Adventure Trip Leading**Credits 1.00 PeopleSoft Course ID 013332 Grading Basis CNC**

To explore basic aspects of adventure trip leading which include planning and logistics, risk management, leadership styles, teaching techniques and basic adventure activity skills.

KIN 175. Wilderness First Aid**Credits 1.00 PeopleSoft Course ID 013333 Grading Basis CNC**

The course Wilderness First Aid course focuses on the basic skills of: Response and Assessment, Musculoskeletal Injuries, Environmental Emergencies, Survival Skills, Soft Tissue Injuries, and Medical Emergencies.

KIN 179. Volleyball**Credits 1.00 PeopleSoft Course ID 010883 Grading Basis CNC**

This course is designed for students interested in developing knowledge and skill in volleyball with instruction tailored to the level of ability. Beginners through intermediate/advanced levels of volleyball experience are welcome. Classes focus on skill development/refinement (setting, spiking, blocking, digging and serving), rules, terminology, strategy, and etiquette.

KIN 190. Basic Sports Officiating**Credits 1.00 PeopleSoft Course ID 011258 Grading Basis CNC**

This course will teach the fundamentals and skills necessary for officiating sports (football, basketball, softball or soccer) at any level. It will also focus on developing on an officiating philosophy, understanding the psychology of officiating, being physically prepared to officiate, understanding the responsibilities of officiating and knowing how and where to work as an official.

KIN 199. New Directions in Kinesiology and Recreation**Credits 1.00 - 3.00 PeopleSoft Course ID 009494 Grading Basis CNC**

In-depth exploration of topics significant in Kinesiology and Recreation. The topic for each semester will be announced on MyMadison.

KIN 201. Introduction to Kinesiology as a Profession**Credits 2.00 PeopleSoft Course ID 001411 Grading Basis GRD**

This course is designed to help students better understand: the breadth and depth of the discipline of kinesiology and the possible professional career applications that fall beneath the kinesiology discipline umbrella. **Prerequisite(s):** First-year or sophomore standing.

KIN 202. Biological Foundations of Kinesiology & Recreation**Credits 3.00 PeopleSoft Course ID 007466 Grading Basis GRD**

Introduction to the biological scientific foundations within the disciplines of kinesiology and recreation. Includes applied anatomy and physiology, biomechanics and exercise physiology.

KIN 205. Introduction to Coaching**Credits 3.00 PeopleSoft Course ID 014387 Grading Basis GRD**

Through experiential learning activities and discussions, students are introduced to the role of the sport coach as well as the professional, interpersonal and intrapersonal knowledge needed to effectively coach.

Prerequisite(s): KIN 202 **Corequisite(s):** KIN 202

KIN 211-218. Coaching Techniques**Credits 2.00 PeopleSoft Course ID 003373 Grading Basis GRD**

The following courses provide motor skills, strategy, rules and officiating techniques in the activities listed: 211, team; 212, track and field; 213, soccer; 214, football; 215, basketball; 216, individual; 217, volleyball; 218, softball.

KIN 217. Coaching Techniques of Volleyball**Credits 2.00 PeopleSoft Course ID 010887 Grading Basis GRD**

This course provides motor skills, strategy, rules and officiating techniques in volleyball.

KIN 221. Skill Laboratory: Rhythmic and Dance Activities**Credits 2.00 PeopleSoft Course ID 010712 Grading Basis GRD**

The skill laboratories are designed for participants who will be in the role of educating others in a particular area of movement. The skill laboratory, Rhythmic & Dance Activities, provides a) basic movement skills, b) analysis of movement, c) developmentally appropriate progressions & teaching ideas, d) curriculum development and e) micro-teaching opportunities.

KIN 222. Skill Laboratory: Teaching Fitness & Wellness in Schools**Credits 2.00 - 10.00 PeopleSoft Course ID 010713 Grading Basis GRD**

The skill laboratories are designed for participants who will be in a role of educating others in a particular area of movement. The skill laboratory, Teaching Fitness & Wellness in the Schools, provides a) basic movement skills, b) analysis of movement, c) developmentally appropriate progressions & teaching ideas, d) curriculum development, and e) micro-teaching opportunities.

KIN 223. Skill Laboratory: Individual and Lifetime Activities**Credits 2.00 - 10.00 PeopleSoft Course ID 010715 Grading Basis GRD**

The skill laboratories are designed for participants who will be in a role of educating others in a particular area of movement. The skill laboratory, Individual & Lifetime Activities, provides: a) basic movement skills, b) analysis of movement, c) developmentally appropriate progressions & teaching ideas, d) curriculum development, and e) micro-teaching opportunities.

KIN 224. Skill Laboratory: Court & Field Games**Credits 2.00 PeopleSoft Course ID 010716 Grading Basis GRD**

The skills laboratories are designed for participants who will be in a role of educating others in a particular area of movement. The skill laboratory, Court & Field Games, provides: a) basic movement skills, b) analysis of movement, c) developmentally appropriate progressions & teaching ideas, d) curriculum development, and e) micro-teaching opportunities.

KIN 225. Skill Laboratory: Wilderness & Adventure Education**Credits 2.00 - 10.00 PeopleSoft Course ID 010714 Grading Basis GRD**

The skill laboratories are designed for participants who will be in a role of educating others in a particular area of movement. The skill laboratory, Wilderness & Adventure Education, provides: a) basic movement skills, b) analysis of movement, c) developmentally appropriate progressions & teaching ideas, d) curriculum development, and e) micro-teaching opportunities.

KIN 241. Introduction to Sport and Recreation Management

Cross listed with: SRM 241

Credits 3.00 PeopleSoft Course ID 008528 Grading Basis GRD

Introduces the sport and recreation management professions in governmental, voluntary, private, public, and commercial settings. Outlines development of sport and recreation and the evolution of the mega-leisure industry. Overviews professional preparation in sport and recreation management.

KIN 242. Introduction to Sport Communication**Credits 3.00 PeopleSoft Course ID 012234 Grading Basis GRD**

This class provides a foundation for students who are pursuing a minor in Sport Communication. The course provides an overview about information management and how it applies to the professional sporting industry. Students

will learn about careers in sport information, how an organization communicates with the media and its constituents, and how communication in sport has evolved and continues to evolve.

KIN 243. Sport Communication Techniques: Broadcasting

Cross listed with: SMAD 243

Credits 3.00 PeopleSoft Course ID 013016 Grading Basis GRD

Study and practice of broadcast and A/V techniques applied in a variety of sport settings. **Prerequisite(s):** KIN 242.

KIN 244. Sport Communication Techniques: Writing and Reporting

Cross listed with: SCOM 244, SMAD 244

Credits 3.00 PeopleSoft Course ID 013017 Grading Basis GRD

Basic skills of sport writing and reporting are studied and applied. Students gain experience in a variety of sports and learn and apply skills in researching, interviewing, reporting, writing columns and features involving the world of sports. **Prerequisite(s):** KIN 242.

KIN 302. Exercise Physiology

Credits 3.00 PeopleSoft Course ID 009620 Grading Basis GRD

This course is designed to help the student explore and understand the physiological changes that occur during an acute bout of exercise and as a result of chronic physical training. Students will study the role various (e.g. cardiovascular, respiratory, nervous, neuro-endocrine, and renal etc.) systems play in maintaining homeostasis during physical activity. In addition, the physiology of physical performance under a range of environmental conditions will also be examined. **Prerequisite(s):** KIN 202 and BIO 270/BIO 270L or BIO 370. **Corequisite(s):** KIN 302L.

KIN 302L. Exercise Physiology Laboratory

Credits 1.00 PeopleSoft Course ID 004774 Grading Basis GRD

Laboratory experiences in exercise physiology. This course must be taken concurrently with KIN 302. **Corequisite(s):** KIN 302.

KIN 303. Motor Development & Learning

Credits 3.00 PeopleSoft Course ID 005078 Grading Basis GRD

This course provides understanding of motor development from early childhood through adulthood. The focus is on the constraints to development and the interaction between the environment, task and learner. The course provides an understanding of the learning processes underlying performance. Emphasis is given to the application in both teaching and coaching settings.

KIN 304. History and Philosophy of Physical Education and Sport

Credits 2.00 PeopleSoft Course ID 009916 Grading Basis GRD

Introductory analysis of various theoretical approaches to the discipline of physical education fitness and sport; brief historical study of the development of school programs and sport; and debates on current professional issues.

KIN 305. Psychological Foundations of Kinesiology

Credits 3.00 PeopleSoft Course ID 009880 Grading Basis GRD

This course focuses on exploring psychological concepts related to participation and performance in sport and exercise contexts. **Prerequisite(s):** Fully admitted to the kinesiology exercise science concentration or declared to the kinesiology PHETE concentration.

KIN 306. Human Biomechanics

Credits 3.00 PeopleSoft Course ID 007695 Grading Basis GRD

Studies of anatomical, physical and mechanical factors, as these factors affect human movement. This course must be taken concurrently with KIN 306L.

Prerequisite(s): BIO 290/BIO 290L and KIN 202. **Corequisite(s):** KIN 306L.

KIN 306L. Human Biomechanics Laboratory

Credits 1.00 PeopleSoft Course ID 001308 Grading Basis GRD

This laboratory course is designed to complement and supplement the lecture course KIN 306. The course will focus on enhancing the student's laboratory experiences in biomechanics. This course must be taken concurrently with KIN 306. **Corequisite(s):** KIN 306.

KIN 309. School Health Content

Credits 3.00 PeopleSoft Course ID 014285 Grading Basis GRD

An overview of select topics in health education content necessary to implement a comprehensive health education program, geared toward child and adolescent populations.

KIN 310. Instructional Methods in Physical Education

Credits 3.00 PeopleSoft Course ID 002297 Grading Basis GRD

Students will apply the affective, cognitive and psychomotor principles in class management, unit and lesson planning, and instructional techniques. This course introduces students to effective teaching strategies and allows application through peer microteaching and teaching students in a school setting. Principles of self-evaluation and reflective teaching are reinforced. **Prerequisite:** Acceptance to the PETE program. **Prerequisite(s):** Acceptance to the PHETE program. **Corequisite(s):** KIN 311.

KIN 311. Elementary Curriculum in Physical Education

Credits 2.00 PeopleSoft Course ID 004391 Grading Basis GRD

Theory and application of games, dance and gymnastic activities compatible with the developmental characteristics of elementary children and the educational objectives of the elementary school. **Prerequisite(s):** Acceptance to the PHETE program. **Corequisite(s):** KIN 310.

KIN 312. The Profession of Teaching Health & Physical Education

Credits 2.00 PeopleSoft Course ID 010718 Grading Basis GRD

Introductory study of the roles of the teacher and the learner and the pedagogical content knowledge of health and physical education. An in-depth examination of the unique position and qualifications of the specialist in physical education and health. Systematic observations will occur.

KIN 313. Adapted Physical Education

Credits 3.00 PeopleSoft Course ID 010720 Grading Basis GRD

Principles and procedures for adapting elementary physical education programs for students with physical, emotional and mental limitations. Laboratory experience included. **Prerequisite(s):** Acceptance to teacher education. **Corequisite(s):** KIN 310.

KIN 314. Assessment in Elementary Physical Education

Credits 3.00 PeopleSoft Course ID 010717 Grading Basis GRD

Introductory study of developmentally appropriate authentic and formal assessment techniques unique to elementary physical education.

Prerequisite(s): Admission to student teaching.

KIN 321. Principles of Health Fitness Assessment

Credits 3.00 PeopleSoft Course ID 006964 Grading Basis GRD

Emphasizes the skills in conducting various health and fitness tests for assessing the five areas of health-related physical fitness (body composition, cardiorespiratory fitness, muscular strength, muscular endurance and flexibility). Interpretation of the test results will also be reviewed.

Prerequisite(s): KIN 202.

KIN 322. Fundamentals of Exercise Prescription

Credits 3.00 PeopleSoft Course ID 013797 Grading Basis GRD

Emphasizes the knowledge and skills necessary to effectively develop and implement an appropriate exercise prescription for improving health-related physical fitness for apparently healthy adults. **Prerequisite(s):** KIN 321.

KIN 325. Kinesiology Honors Research Prep

Credits 3.00 PeopleSoft Course ID 013752 Grading Basis GRD

This course is designed to provide Honors Students (Tracks 1, 2 & 3) with insight into the research carried out by current Kinesiology faculty members prior to enrolling in KIN 499A. Students will identify a research topic suitable for their Honors Thesis, gain insight into the application of the scientific method in Kinesiology research, and interact with Kinesiology faculty members and students actively involved in the research process. The course is by permission only.

KIN 329. Social Aspects of Sport

Credits 3.00 PeopleSoft Course ID 006621 Grading Basis GRD

This class is designed to familiarize students with the concepts of sport as they relate to individuals and the larger society in which they live and the ways in which this relationship is reciprocal, with both people impacting the world of sport and sport impacting individual, social, cultural, economic and political developments. Students learn the tools needed to think in a critical way about sports in society and make informed choices about sports and participation.

KIN 353. Maximizing Sports Performance

Credits 3.00 PeopleSoft Course ID 009823 Grading Basis GRD

This course explores current sport psychology theories, models and concepts as they relate to sport behavior and performance. Students examine the theoretical basis of cognitive sport skills and apply the information to the sport environment. No prerequisites.

KIN 381. Practicum in Exercise Science

Credits 3.00 PeopleSoft Course ID 000307 Grading Basis CNC

This practicum in exercise science provides the student with supervised experience in their field of study. May be repeated in different settings.

Prerequisite(s): KIN 302. Corequisite(s): KIN 302.

KIN 407. Biomechanics for the Healthcare Professional

Cross listed with: HTH 441

Credits 3.00 PeopleSoft Course ID 000769 Grading Basis GRD

This course is designed to introduce the student to a variety of biomechanical concepts and applications as related to the health professions. Specific attention will be given to the biomechanical aspects of the musculoskeletal system. **Prerequisite(s): BIO 290/BIO 290L.**

KIN 410. School Health Content for PHETE

Credits 3.00 PeopleSoft Course ID 000887 Grading Basis GRD

An overview of selected topics in health content required for teacher candidates preparing to teach health education in public schools. Special emphasis will be on issues relevant to teaching those topics in schools. **Prerequisite(s): KIN 309**

KIN 411. Measurement and Evaluation in Kinesiology

Credits 3.00 PeopleSoft Course ID 002781 Grading Basis GRD

The administration and interpretation of measurement and evaluation procedures in kinesiology and recreation.

KIN 422. Advanced Principles of Group Exercise Leadership

Credits 3.00 PeopleSoft Course ID 010390 Grading Basis GRD

Theories, principles and procedures involved with leading group fitness classes. Students will gain knowledge and experience in class design and choreography development. Programming for children, older adults, pregnancy and aquatic exercise will be included. Practical and written assessments will occur throughout the semester. Participation in group exercise classes is a requirement. Students will have the opportunity to enroll in the AFAA Primary Group Exercise Certification. **Prerequisite(s): KIN 100, KIN 202, or permission of the instructor.**

KIN 424. Exercise and Nutrition in Chronic Disease

Cross listed with: NUTR 455

Credits 3.00 PeopleSoft Course ID 000411 Grading Basis GRD

This interdisciplinary course examines the evidencebased relationship between exercise and diet patterns and behaviors, and major chronic diseases. Students will understand the epidemiology and pathogenesis of prevailing chronic diseases. Emphasis will be placed on developing exercise and dietary strategies to reduce the burden of chronic disease. **Prerequisite(s): KIN 302, KIN 321, KIN 322**

KIN 425. Concepts of Strength and Conditioning

Credits 3.00 PeopleSoft Course ID 008986 Grading Basis GRD

Theory and application of coaching concepts in strength/conditioning training including program design, testing and specific techniques for the physical development of athletes. Designed for students interested in working with athletic populations, this course also prepares students for NSCA certification.

Prerequisite(s): KIN 100 or HTH 100 and KIN 202.

KIN 426. Physical Activity Behaviors

Credits 3.00 PeopleSoft Course ID 005282 Grading Basis GRD

This course will focus on the theoretical and practical applications of behavior change related to healthy lifestyles with an emphasis on physical activity. In addition, course content will include a detailed investigation into the psychological and environmental factors associated with adoption and maintenance of healthy behaviors including a regular physical activity program.

Prerequisite(s): Senior Standing

KIN 428. Advanced Topics in Exercise Science and Leadership

Credits 3.00 PeopleSoft Course ID 011227 Grading Basis GRD

This course is designed to allow students to study specific topics in exercise science and leadership. Topics will be chosen each semester and reflect current research in exercise science related to clinical exercise physiology, human performance and methodologies or trends in exercise science/leadership. May be repeated once (maximum 6 credits) for credit when course content changes. **Prerequisite(s): KIN 302 and KIN 302L .**

KIN 429. Special Topics in Adapted Physical Education

Credits 3.00 PeopleSoft Course ID 013018 Grading Basis GRD

This course provides an in depth look into specific areas within the field of adapted physical education and adapted physical activity. This application-based course provides hands-on experiences that will allow students to work with individuals with disabilities in a variety of settings. Graduate students will also be asked to analyze and provide feedback on the instructional behaviors of the undergraduate student instructors.

KIN 430. Exercise Across the Lifespan

Credits 3.00 PeopleSoft Course ID 006161 Grading Basis GRD

An advanced course in exercise science that examines aspects of physical activity and exercise as they relate to specific phases of the human lifespan. This course will address the importance of physical activity for children, pregnant women, and older adults and will include an in-depth study of aspects of exercise physiology that are unique to these populations.

KIN 431. Environmental Exercise Physiology

Credits 3.00 PeopleSoft Course ID 013798 Grading Basis GRD

An advanced course in exercise physiology that examines how human physiological systems respond and adapt to exercise performed in challenging environmental conditions (i.e. high altitude, diving, hot, cold).

Prerequisite(s): KIN 302 & KIN 302L .

KIN 432. Physiology of Endurance Performance

Credits 3.00 PeopleSoft Course ID 013810 Grading Basis GRD

This course aims to provide students with an understanding of how to utilize endurance training to maximize athletic performance. Various factors that limit endurance performance and examine methods to overcome these factors will

be explored. Emphasis will be placed on the role of seasonal periodization and program planning to maximize the long-term development of athletes. Supplemental factors that may also aid performance, such as equipment, nutrition, and ergogenic aids will be discussed. **Prerequisite(s):** KIN 302 & KIN 302L

KIN 433. Exercise, Cardiovascular Disease and ECG Assessment

Credits 3.00 PeopleSoft Course ID 013751 Grading Basis GRD

This course is designed to provide students with a foundational information related to electrocardiography, diagnostic exercise testing and the effects of exercise on specific cardiovascular diseases. **Prerequisite(s):** KIN 302.

KIN 440. Exercise Immunology

Credits 3.00 PeopleSoft Course ID 014465 Grading Basis GRD

Students will develop an in-depth understanding of the human immune system and how it is impacted by exercise. Specific focus will be placed on examining the relationship between immune function, exercise and risk of infections. Additional aims will be to explore physiological and molecular mechanisms that determine immune function and how they are impacted by acute and chronic exercise. **Prerequisite(s):** KIN 302.

KIN 450. Principles of Coaching Methods

Credits 3.00 PeopleSoft Course ID 003837 Grading Basis GRD

This course will focus on methods of teaching sport skills, organizing and running effective practices, evaluating athletes, and developing season plans based on long-term athlete development. Developing team culture, working with multiple stakeholders and creating a safe practice environment are also included. Overall, students will further develop core competencies in coaching practice and will gain practical experience in the field. **Prerequisite(s):** KIN 205.

KIN 473. Internship in Coaching

Credits 3.00 PeopleSoft Course ID 007979 Grading Basis CNC

A sequence of selected experiences in coaching, which provides the student with supervised experience to develop their coaching effectiveness.

Prerequisite(s): Coaching Education minor, successful completion (minimum of "C") of all courses in the minor, cumulative GPA of 2.0 or higher and permission of instructor.

KIN 474. Practicum in Sport Communications

Credits 3.00 PeopleSoft Course ID 011295 Grading Basis CNC

A sequence of selected practicum experiences which provides the student with supervised practicum experience in Sport Communications.

KIN 480. Student Teaching in Physical Education

Credits 8.00 PeopleSoft Course ID 004750 Grading Basis CNC

A supervised teaching experience at the elementary school setting that provides teacher candidates with opportunities to experience the classroom environment, grow professionally, and develop their pedagogical skills.

Prerequisite(s): Acceptance into student teaching.

KIN 481. Internship in Exercise Science

Credits 4.00 - 12.00 PeopleSoft Course ID 007820 Grading Basis CNC

This professional experience in exercise science affords students the opportunity to apply theory and methodology in their field of study under qualified supervision from the cooperating agency and the university. May be repeated for a maximum of 12 credits. **Prerequisite(s):** KIN 381 or permission of instructor.

KIN 490. Special Studies in Kinesiology and Recreation

Credits 1.00 - 3.00 PeopleSoft Course ID 003533 Grading Basis GRD

Designed to give superior students in physical education an opportunity to complete independent study and/or research under faculty supervision. **Prerequisite(s):** Permission of the department head.

KIN 499A. Honors

Credits 1.00 PeopleSoft Course ID 000204 Grading Basis GRD

Students will work with a faculty member to conceptualize a research project and then compose a proposal of the project with anticipated methods.

KIN 499B. Honors

Credits 3.00 PeopleSoft Course ID 000677 Grading Basis GRD

Students will carry out the data collection for the proposed project under the guidance of their faculty mentor.

KIN 499C. Honors

Credits 2.00 PeopleSoft Course ID 008845 Grading Basis GRD

Students will compose the final project report, in manuscript format and according to departmental guidelines.

Korean

KOR 101. Elementary Korean I

Credits 3.00 - 4.00 PeopleSoft Course ID 012169 Grading Basis GRD

The fundamentals of Korean through listening, speaking, reading, and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language lab. If student has had two or more years of the language in high school he/she will not receive credit for the course.

KOR 102. Elementary Korean II

Credits 3.00 - 4.00 PeopleSoft Course ID 012170 Grading Basis GRD

The fundamentals of Korean through listening, speaking, reading, and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language lab. If student has had two or more years of the language in high school he/she will receive credit for the course.

Prerequisite(s): KOR 101 or permission of the instructor.

KOR 231. Intermediate Korean I

Credits 3.00 PeopleSoft Course ID 012171 Grading Basis GRD

A thorough review of grammar, vocabulary building, conversation, composition, and reading. A student cannot earn credit for KOR 231 after completing KOR 232. **Prerequisite(s):** KOR 102 or permission of the instructor.

KOR 232. Intermediate Korean II

Credits 3.00 PeopleSoft Course ID 012173 Grading Basis GRD

A thorough review of grammar, vocabulary building, conversation, composition, and reading. **Prerequisite(s):** KOR 231 or permission of instructor.

KOR 300. Korean Grammar and Communication

Credits 3.00 PeopleSoft Course ID 013929 Grading Basis GRD

Intensive training in grammatical structures and their application to oral and written communication. Instruction is in Korean. Fulfills the College of Arts and Letters writing-intensive requirement for possible International Affairs majors and/or IBUS majors. **Prerequisite(s):** KOR 232.

KOR 320. Korean Oral and Written Communication

Credits 3.00 PeopleSoft Course ID 013930 Grading Basis GRD

Intensive training in the use of modern, everyday Korean with emphasis on conversation and composition. Readings in Korean will provide a context for discussion and writing. Instruction is in Korean. **Prerequisite(s):** KOR 300.

KOR 446. Special Topics in Korean Literature

Credits 3.00 PeopleSoft Course ID 014252 Grading Basis GRD

Study of a particular topic in Korean literature. It may cover all or a specific Korean literature genre. Course may be repeated if content varies.

Prerequisite(s): Permission of the instructor.

KOR 447. Special Topics in Korean Culture

Credits 3.00 PeopleSoft Course ID 014253 Grading Basis GRD

Students will study a particular topic in the culture of Korea. Course may be repeated if content varies. Instruction is in English.

KOR 448. Special Topics in Korean Linguistics

Credits 3.00 PeopleSoft Course ID 014254 Grading Basis GRD

Students will study a particular topic in Korean linguistics. Topics could include an introduction to Korean sociolinguistics or psycholinguistics. Course may be repeated if content varies. **Prerequisite(s):** KOR 300.

KOR 490. Special Studies in Korean

Credits 1.00 - 4.00 PeopleSoft Course ID 013020 Grading Basis GRD

Special topics or independent studies in Korean.

Latin

LAT 101. Elementary Latin I

Credits 3.00 - 4.00 PeopleSoft Course ID 008160 Grading Basis GRD

An introductory course for students who intend to acquire only a reading knowledge of classical and medieval Latin. Systematic study of the fundamentals of grammar. If student has had two or more years of the language in high school he/she will not receive credit for the course.

LAT 102. Elementary Latin II

Credits 3.00 - 4.00 PeopleSoft Course ID 001412 Grading Basis GRD

An introductory course for students who intend to acquire only a reading knowledge of classical and medieval Latin. Systematic study of the fundamentals of grammar. If student has had two or more years of the language in high school he/she will not receive credit for the course.

Prerequisite(s): LAT 101.

LAT 231. Intermediate Latin I

Credits 3.00 PeopleSoft Course ID 005353 Grading Basis GRD

An introduction to Latin literature. The further study of Latin grammar and the elements of Latin prosody are also presented. A student cannot earn credit for LAT 231 after completing LAT 232. **Prerequisite(s):** LAT 102 or permission of the instructor.

LAT 232. Intermediate Latin II

Credits 3.00 PeopleSoft Course ID 005777 Grading Basis GRD

An introduction to Latin literature. The further study of Latin grammar and the elements of Latin prosody are also presented. **Prerequisite(s):** LAT 231 or permission of instructor.

LAT 490. Special Studies in Latin

Credits 1.00 - 4.00 PeopleSoft Course ID 009599 Grading Basis GRD

Latin American, Latinx and Caribbean Studies

LAXC 252. Introduction to Latin American, Latinx and Caribbean Studies [C2HQC]

Credits 3.00 PeopleSoft Course ID 014322 Grading Basis GRD

An introductory interdisciplinary survey of basic theoretical concepts to analyze the Latin American, Caribbean and U.S. Latinx experience, with special focus on how historical processes in Latin America and the Caribbean gave rise to specific and varied cultural production and forms in the region.

LAXC 299. Internship in Latin American, Latinx and Caribbean Studies

Credits 1.00-3.00 PeopleSoft Course ID 014201 Grading Basis GRD

Provides Latin American, Latinx and Caribbean Studies minors with work experience in career fields they are interested in pursuing. A journal, internship report, research paper, bibliography and evaluation from the intern provider are required. May count as an elective for the LAXC minor. **Prerequisite(s):** Approval of the LAXC minor coordinator.

LAXC 300. Topics in Latinx Studies

Credits 3.00 PeopleSoft Course ID 014422 Grading Basis GRD

This course introduces students to key issues in the interdisciplinary field of Latinx Studies, which examines the communities, cultures, histories and experiences of people of Latin American descent in the United States. The topic for each semester will be announced on MyMadison. Course topics will highlight the historical and contemporary issues that shape the political, social and cultural practices, as well as the lived experiences of Latinxs in the United States. The course will encompass various approaches to the field of Latinx studies, potentially including media studies, political science, literature, history, anthropology, sociology, communication and more. LAXC 300 will begin with a brief introduction that asks "What is Latinx Studies?" The course will then examine a range of topics including colonialism, race, ethnicity, class, gender, sexuality, migration, language, media, representation, participation and resistance. Students will critically engage with written text and various media that encourage them to examine Latinx communities in all their diversity and complexity. **Prerequisite(s):** LAXC minors; or by permission of instructor.

LAXC 375. Latina/o/x Politics: Origins and Futures

Cross listed with: POSC 375.

Credits 3.00 PeopleSoft Course ID 014594 Grading Basis GRD

The course will focus on the Latina/o/x populations in the United States and how the category of 'Latino' came into existence. Furthermore, students will learn how Latina/o/x identity has evolved over time as well as become politically salient within 21st century politics. The goal is for the student to develop a broad, conceptual understanding of how the term 'Latino' came into existence as well as how individuals who identify as 'Latina/o/x' have politically organized throughout history. **Prerequisite(s):** POSC 225.

LAXC 378. Borderlands Policy: Latina/o/x Politics in Context

Cross listed with: POSC 378

Credits 3.00 PeopleSoft Course ID 014502 Grading Basis GRD

This course is centered on the policies surrounding the U.S. and Mexico border, with a focus on the effect these policies have had on Latina/o/x populations. Students will examine peer-reviewed studies of immigration policy, public opinion and political rhetoric, as well as individual accounts of the immigrant experience. By the end of the course, students will have an increased understanding of how border policy has historically evolved and the Latino/a/x population reactions across time. **Prerequisite(s):** POSC 225.

LAXC 490. Independent Study in Latin American, Latinx and Caribbean Studies

Credits 3.00 PeopleSoft Course ID 014055 Grading Basis GRD

Designed to give capable students in Latin American, Latinx and Caribbean Studies an opportunity to complete independent study under faculty supervision. **Prerequisite(s):** Admission by recommendation of the instructor and permission of the program coordinator.

LAXC 495. Special Topics in Latin American, Latinx and Caribbean Studies

Credits 3.00 PeopleSoft Course ID 014057 Grading Basis GRD

In-depth examination of selected topics of current importance to the field of Latin American, Latinx and Caribbean Studies. May be repeated for credit when course content changes. **Prerequisite(s):** Permission of the program coordinator required.

Learning, Design and Technology

LDT 150. Information in Contemporary Society

Credits 3.00 PeopleSoft Course ID 009076 Grading Basis GRD

This course critically examines how data and information impact individuals and communities in contemporary society, with a focus on how information technologies mediate what and how we learn and how we interact. Recognizing that individuals and communities need, create and analyze information to function in society, learners will examine the impact of new technologies on

topics such as democracy, diversity and social justice. This course is designed to encourage reflection by inviting learners into a deeper discourse about the ethical role of information in society. Note: Will not count as a social science course for teacher licensure.

LDT 370. Instructional Technology

Cross listed with: *EDUC 370.*

Credits 3.00 PeopleSoft Course ID 008184 Grading Basis GRD

In this course, learners will establish a foundational understanding of technology and media as a means to empower pedagogical practice and set conditions for learning. The course is intended to help develop awareness of, and appreciation for, a range of technical skills and reflective practices that may be applied in daily life and in future course work and careers. Learners will create an ePortfolio of digital media developed in this course. **Prerequisite(s):** *Human resources development minors, educational media minors or adult degree program students only.*

LDT 372. Visual Literacy

Credits 3.00 PeopleSoft Course ID 012708 Grading Basis GRD

This course will foster the ability to recognize, critique and edit visual elements and representations for learning. Learners will select appropriate digital tools and techniques, apply proven principles and theories in practice, and give and receive constructive feedback to improve visual design through iteration. Learners will be expected to design original, user-centered and aesthetically pleasing digital visuals grounded in effective design practice and learning theories. **Prerequisite(s):** *PSYC 160 and LDT 370.* **Corequisite(s):** *LDT 370.*

LDT 374. Photography for Learning

Credits 1.00 PeopleSoft Course ID 012717 Grading Basis GRD

In this course, learners will develop an intermediate understanding of the tools, principles, practices and theoretical underpinnings of designing and creating digital photographic imagery for learning. **Prerequisite(s):** *LDT 370 and LDT 372.* **Corequisite(s):** *LDT 372.*

LDT 376. Video for Learning

Credits 1.00 PeopleSoft Course ID 012709 Grading Basis GRD

In this course, learners will develop an intermediate understanding of the tools, principles, practices and theoretical underpinnings of planning, producing and editing digital instructional videos. **Prerequisite(s):** *LDT 370 and LDT 372.* **Corequisite(s):** *LDT 372.*

LDT 378. Web Design for Learning

Credits 1.00 PeopleSoft Course ID 012710 Grading Basis GRD

In this course, learners will develop an intermediate understanding of the tools, principles, practices and theoretical underpinnings of designing and creating web applications for learning. **Prerequisite(s):** *LDT 370 and LDT 372.*

Corequisite(s): *LDT 372.*

LDT 385. Foundations of Instructional Design

Credits 3.00 PeopleSoft Course ID 011711 Grading Basis GRD

This capstone course will facilitate the application of the knowledge, skills and attitudes developed in earlier course work in the educational media minor. Learners will apply their technical, design and development skills to solve authentic problem(s) that require an understanding of how people learn. This will involve using digital media and instructional design processes that lead to the completion of a capstone project. **Prerequisite(s):** *PSYC 160, LDT 370, LDT 372, LDT 374, LDT 376 and LDT 378.* **Corequisite(s):** *LDT 374, LDT 376 and LDT 378.*

Learning, Technology and Leadership Education

LTLE 332. Video Production

Credits 1.00 PeopleSoft Course ID 001336 Grading Basis GRD

A basic understanding of the principles of video equipment along with skills in the use, set up and operation of editing applications.

LTLE 375. Selected Topics in Media

Credits 1.00 - 3.00 PeopleSoft Course ID 010400 Grading Basis GRD

An in-depth study of a narrowly defined topic or practice in media. May be repeated for credit when course content changes.

LTLE 377. Augmented/Virtual Reality and 360 Media: Innovation in Immersive Technology for Education

Credits 3.00 PeopleSoft Course ID 014071 Grading Basis GRD

This course is an applied exploration of immersive technology, focused on applications to training and education. Virtual, augmented, mixed reality, 360° media, 3D scanners and other emerging related technology will be covered. The course is intended for novices to the field of AR/VR and immersive media production. Students will develop unique applications, media and more through interdisciplinary team-based projects for real clients, focused on areas of immersive technology in education.

LTLE 490. Special Study in Ltle

Credits 1.00 - 3.00 PeopleSoft Course ID 007256 Grading Basis GRD

Designed to provide in-depth and up-to-date exposure to the topics/issues pertinent to human resource development and allow students to explore topics of special interest in human resource development.

Prerequisite(s): *Permission of the instructor.*

Literacy Education

LED 212. Foundations of Literacy for Middle School Teachers

Credits 3.00 PeopleSoft Course ID 010550 Grading Basis GRD

This course serves as a starting point for learning about teaching middle school students. It assists future teachers in developing knowledge of literacy and how to form relationships with middle school adolescents, serving as an introduction for preservice teachers to the foundations of reading and writing development and the elements of balanced literacy instruction in the middle grades. Through reading, writing and field applications across content areas, preservice teachers explore literacy engagement and diversity. **Corequisite(s):** *Middle education majors must take MIED 211.*

LED 240. Children's Literature

Credits 3.00 PeopleSoft Course ID 001327 Grading Basis GRD

The study of a variety of children's literature and the practices, principles and procedures for selecting and evaluating works for children, giving consideration to their motivational and developmental effects. **Prerequisite(s):** *Completion of Cluster One.*

LED 254. Literature for Adolescents

Credits 3.00 PeopleSoft Course ID 001939 Grading Basis GRD

A study of literature which has been written for or appeals to young adults and adolescents, including practices, principles and procedures for evaluating and making literary materials appealing to adolescents. **Prerequisite(s):** *Completion of Cluster One.*

LED 300. Reading Instruction and Assessment for Diverse Learners PK-6

Credits 3.00 PeopleSoft Course ID 014202 Grading Basis GRD

This course will provide PK-6 preservice teachers with the foundations of reading development, assessment techniques, and instructional strategies. This course in combination with LED 350 and LED 462 comprise the literacy instruction for prospective elementary education teachers. **Prerequisite(s):** *Accepted to teacher education.*

LED 350. Writing Instruction, Assessment and Technology for Diverse Learners PK-6

Credits 3.00 PeopleSoft Course ID 014203 Grading Basis GRD

This course involves instruction and discussion of the writing process, development and assessment. This course, in combination with LED 300 and LED 462, comprise the literacy instruction for prospective elementary education teachers. **Prerequisite(s):** *Accepted to teacher education.*

LED 355. Inclusive Early Literacy Development and Acquisition

Credits 3.00 PeopleSoft Course ID 014027 Grading Basis GRD

This is the first course in a two-course sequence designed to provide pre-service inclusive early childhood teachers with the foundation of literacy development for children, as well as instruction to support and enhance the emergence and continued development of literacy learning. **Prerequisite(s):** *IECE 303.*

LED 366. Early Literacy Development and Acquisition

Credits 3.00 PeopleSoft Course ID 010630 Grading Basis GRD

This course will provide preservice teachers with an understanding of the foundations of early literacy development, and instructional strategies and assessment techniques which support the acquisition of literacy.

Prerequisite(s): *Teacher Ed Program 02 Flag*

LED 401. Problems in Literacy Education

Credits 3.00 PeopleSoft Course ID 009135 Grading Basis GRD

Considers current problems and issues in reading education as these problems and issues relate to the professional education of preservice teachers.

Prerequisite: Permission from the coordinator of the program where the student is enrolled. **Prerequisite(s):** *Teacher Ed Program 02 Flag*

LED 420. Content Area Literacy, K-12

Credits 2.00 PeopleSoft Course ID 010579 Grading Basis GRD

This course is designed for preservice teachers and will provide an introduction to the foundations of reading and balanced literacy instruction for students in kindergarten through grade 12. Through reading and writing across content areas, preservice teachers will explore literacy engagement, diversity and special needs. **Prerequisite(s):** *Teacher Educ 01*

LED 430. Development, Assessment and Instruction of Literacy: K-12

Credits 3.00 PeopleSoft Course ID 010580 Grading Basis GRD

This course is designed to provide preservice teachers with a foundation of literacy development, instructional strategies and assessment techniques which support the acquisition and development of literacy in diverse classrooms across the curriculum in grades K-12.

LED 435. Literacy Development and Instruction for English Language Learners

Credits 3.00 PeopleSoft Course ID 013141 Grading Basis GRD

Prepares for literacy instruction of English Language Learners beyond the emergent stage. Content includes assessment and instruction, particularly comprehension instruction for individuals, small groups, and whole class instruction. Students examine heterogeneous classroom structure and plan instruction for the diversity of abilities, personalities, cultures, languages, and all individual learners in every educational setting. A practicum accompanies this course. **Corequisite(s):** *TESL 383.*

LED 436. Literacy Learning in the Elementary Grades

Credits 3.00 PeopleSoft Course ID 010606 Grading Basis GRD

This course will provide preservice teachers with an understanding of developmentally appropriate instructional strategies and assessment techniques to help all students in elementary grades become literate using reading, writing, listening and speaking in strategic and authentic ways. **Prerequisite(s):** *Grade of "C" or better in LED 366*

LED 440. Disciplinary Literacy in Secondary Education

Credits 3.00 PeopleSoft Course ID 011927 Grading Basis GRD

This course will provide preservice teachers in secondary education with an understanding of how to create productive contexts for literacy-based learning. Particular areas of emphasis include selecting reading materials, understanding literacy development and facilitating individual student engagement.

Prerequisite(s): *Secondary education majors: EDUC 310 and MSSE 370.*

Secondary education minors: Either MSSE 101, MSSE 201 or CSM 199; and EDUC 310, MSSE 370 and MSSE 371. Middle education majors: EDUC 310, MIED 211, LED 212 and MSSE 370.

LED 456. Inclusive Literacy Learning in the Primary Grades

Credits 3.00 PeopleSoft Course ID 013995 Grading Basis GRD

This course is the second of a two-course sequence covering the development of the reading process and methods for teaching reading in elementary classrooms, as well as assessment and intervention for students at risk for or with identified disabilities. Participants will develop an understanding of the reading process and reading disabilities. Emphasis will be on the use of effective practices for primary, secondary and tertiary instruction for children across the lifespan. **Prerequisite(s):** *LED 355.*

LED 462. Disciplinary Literacy for Diverse Classrooms PK-6

Credits 3.00 PeopleSoft Course ID 014129 Grading Basis GRD

This capstone literacy course for pre-service PK-6 teachers will build on the foundation of literacy developed in LED 300 and LED 350 to enable students to integrate reading and writing instruction across the content areas and learn how to differentiate literacy to meet the needs of all learners in a classroom.

Prerequisite(s): *LED 300 and LED 350.*

LED 472. Literacy Assessment & Instruction in the Content Areas for the Middle Grades

Credits 3.00 PeopleSoft Course ID 010551 Grading Basis GRD

This course will introduce preservice teachers to the relationship between literacy assessment practices and instructional design for teaching reading and writing in content area classrooms. Using case study methodology, preservice teachers will explore individual students' literacy strengths, areas that need development, and specific instructional strategies. **Prerequisite(s):** *LED 212.*

Corequisite(s): *MSSE 370, MSSE 371 and practicum.*

LED 490. Special Studies in Literacy

Credits 1.00 - 3.00 PeopleSoft Course ID 008755 Grading Basis GRD

Designed to give capable students, under faculty guidance, an opportunity to engage in the independent study of educational problems. **Prerequisite(s):** *Plan for the study must be approved by the faculty adviser and the coordinator of the program in which the student is enrolled.*

Management

MGT 305. Organizational Behavior and Human Resource Management

Credits 3.00 PeopleSoft Course ID 010657 Grading Basis GRD

This course provides students with an overview of topics necessary for effective management of people, including psychological and sociological theories around how people behave in organizations, as well as the policies and practices that organizations can implement to leverage the skills and talents of their employees most effectively for organizational success. **Prerequisite(s):** *Non-COB major and sophomore standing.*

MGT 310. Business Fundamentals for Entrepreneurs

Credits 3.00 PeopleSoft Course ID 013931 Grading Basis GRD

This course requires students to develop basic literacy in the language of business and will include foundational concepts related to forms of business ownership, management, marketing, operations and financial resources. It is

designed for students from non-business majors who enroll in the entrepreneurship minor. **Prerequisite(s):** *Open only to non-business majors who have been accepted into the entrepreneurship minor.*

MGT 320. Management of Innovation and Technology

Credits 3.00 PeopleSoft Course ID 010566 Grading Basis GRD

This course focuses on technological innovation as a primary source of achieving and sustaining competitive advantage for established firms as well as start-ups. Students explore the current challenges facing business leaders in their attempts to build firms that can consistently and successfully bring technological innovations to market. The course provides students with opportunities to integrate creativity, innovation and problem-solving processes. Innovation management includes topics such as technology strategy, fit between product strategy and business unit strategy, the psychology of discovery and invention, the entrepreneurial mindset, managing innovation processes, and teams and protecting innovation. **Prerequisite(s):** *For management majors: COB 300; for entrepreneurship minors: MGT 310 or COB 300; or departmental permission.*

MGT 325. Project Management

Credits 3.00 PeopleSoft Course ID 010565 Grading Basis GRD

This course focuses on the knowledge and skills needed to select, plan, schedule, evaluate, control, and complete a variety of complex projects that help achieve organizational goals. Students learn foundational concepts and current project management frameworks. Applying project management tools and techniques to workplace situations using project management software is emphasized. **Prerequisite(s):** *COB 300 and Management majors; or departmental permission.*

MGT 340. International Management

Credits 3.00 PeopleSoft Course ID 000543 Grading Basis GRD

A comparative analysis of management styles and organizational effectiveness across cultural boundaries and within other political, legal and economic environments. **Prerequisite(s):** *COB 300 and management or international business major.*

MGT 357. Evidence-Based Decision Making

Credits 3.00 PeopleSoft Course ID 013734 Grading Basis GRD

This course provides students with the opportunity to use research and data analysis to explore managerial and organizational situations, and to develop and practice empirically based decision making skills. Students will learn about evidence based management, an approach to decision making based on the best obtainable evidence and unbiased organizational facts. The course will help students to develop the knowledge and skills needed to identify, access, interpret, and use factual information and empirical evidence to be more effective decision makers and managers. **Prerequisite(s):** *COB 300 and Management majors; or departmental permission.*

MGT 365. Fundamentals of Human Resource Management

Credits 3.00 PeopleSoft Course ID 006060 Grading Basis GRD

A study of employer-employee relationships in business and industry including personnel policies and methods; selection, placement, training and promotion of employees; and recent trends in employment practices. **Prerequisite(s):** *COB 300 for management majors, or PPA 265 for PPA majors; or departmental permission. Corequisite(s):* *COB 300 for management majors, or PPA 265 for PPA majors.*

MGT 370. Quality Management

Credits 3.00 PeopleSoft Course ID 004746 Grading Basis GRD

The application of statistics to the control of quality in planning, organizing, motivating and controlling quality. Application of models and distributions in

statistical quality control, process capability, control charts, acceptance sampling and reliability. Emphasis is on the design, implementation and management of quality throughout the firm. **Prerequisite(s):** *COB 300 and junior standing.*

MGT 375. Business Ethics and Social Responsibility

Credits 3.00 PeopleSoft Course ID 012125 Grading Basis GRD

This course explores the nature of moral values, moral judgments, and ethical decision and behaviors in modern business organizations. Alternative perspectives of right and wrong will be considered. A highly interactive course, students will analyze and discuss ethics-related current events, case studies, real-world scenarios, and common ethical dilemmas in order to improve skills in recognition, understanding, and decision-making related to business ethics and social responsibility at various organizational levels. This course is open to students in any COB major provided they meet the course prerequisites.

Prerequisite(s): *COB 300 and management major, or departmental permission.*

MGT 390. Organizational Leadership

Credits 3.00 PeopleSoft Course ID 011562 Grading Basis GRD

This course provides a foundation for understanding and applying leadership knowledge and skills at the individual, dyadic, team, and organizational levels. It enables students to better understand themselves and others, and utilize that knowledge to more effectively lead and manage in organizational settings. The course incorporates theory, cases, assessment tools, empirical evidence, and application-based exercises. Contemporary leadership theories and related frameworks involving values, attitudes, motivation, ethics, and group processes are used to foster leadership development. **Prerequisite(s):** *COB 300 and Management majors; or departmental permission*

MGT 405. Topics in Management for Non-majors

Credits 3.00 PeopleSoft Course ID 013288 Grading Basis GRD

This course is designed to allow exploration of areas of current topical or unique interest or to leverage special situations. Course content will vary. Consult your adviser for specific topics each semester when the course is offered. Course may be repeated for credit when topics vary. **Prerequisite(s):** *Cumulative 2.0 GPA in all courses taken at JMU, open only to non-business majors.*

MGT 457. Management Consulting Fundamentals

Credits 3.00 PeopleSoft Course ID 013796 Grading Basis GRD

This course provides an overview of business analysis, the consulting industry and the analytical practices used in the consulting process. Students explore the business analysis process, learning to identify and communicate the need for organizational change and define solutions that maximize organizational value. Also, students examine the nature and purpose of consulting, explore careers related to consulting, learn consulting frameworks and methods and develop an understanding of the consultant-client relationship. **Prerequisite(s):** *MGT 357.*

MGT 460. Employment Law

Credits 3.00 PeopleSoft Course ID 008828 Grading Basis GRD

This course provides students with an in-depth understanding of federal regulations, court decisions, and public labor policies that influence employment decisions, employee and labor relations, and employee safety and health. Includes historical evolution of federal legislation relating to employment, the labor movement, and the emergence of public sector bargaining. Explores the impact of regulations, court cases, and union contracts on general business operations. **Prerequisite(s):** *COB 300 and MGT 365.*

MGT 461. Introduction to Supply Chain Management

Credits 3.00 PeopleSoft Course ID 013828 Grading Basis GRD

Introduction to Supply Chain Management provides the student with a foundational knowledge of the content and processes of supply chains, with an emphasis on the strategic nature of supply chain management decisions. This course offers a survey of critical supply chain topics such as design, sourcing, networks, risk management, transportation, revenue generation, and sustainability. Selected topic areas will be evaluated through the lens of geographic information systems (GIS) using ArcGIS. **Prerequisite(s):** *COB 300 (for Management majors), or COB 300 and admission to the Global Supply Chain Management minor (for all other COB Majors), or ISAT 211 and admission to the Global Supply Chain Management minor (for CISE majors).*

MGT 467. Advanced Management Consulting

Credits 3.00 PeopleSoft Course ID 001629 Grading Basis GRD

This is an applied course where students will work in teams on consulting projects for businesses or organizations. Students apply knowledge and skills developed in MGT 357 and MGT 457. Students engage in a comprehensive consulting experience designed to build competence and confidence in analysis, problem-solving and managing client relations. Grades will be determined largely by the quality of client deliverables. **Prerequisite(s):** *MGT 457.*

MGT 470. Acquiring and Developing Human Capital

Credits 3.00 PeopleSoft Course ID 013741 Grading Basis GRD

This course provides an in-depth study and application of staffing concepts and practices, including how to identify, place, and develop the best candidates for a given position. Topics include workforce planning, recruitment, selection, training and development of employees, and succession planning.

Prerequisite(s): *MGT 365.*

MGT 471. Entrepreneurship and Small Business Management

Credits 3.00 PeopleSoft Course ID 013735 Grading Basis GRD

This course provides an in-depth examination of entrepreneurship and its impact and significance in the global economy, including a focus on small business. Students will learn theory and then apply it through experiential exercises and a number of different engagements. This course explores topics such as the entrepreneurial process, idea generation methodology, sources of funding, growth, succession planning, and exit strategies. Students engage in activities such as feasibility analysis, selection of appropriate entry and growth strategies, and firm valuation techniques. **Prerequisite(s):** *For management majors: COB 300; for entrepreneurship minors: MGT 310 or COB 300; for all others: Departmental permission.*

MGT 472. New Venture Creation

Credits 3.00 PeopleSoft Course ID 004444 Grading Basis GRD

This experiential course explores the context and entrepreneurial process involved in creating new ventures. Students work in multidisciplinary teams to recognize and evaluate opportunities, develop feasible business models and demonstrate high-performance team practices. Working with experienced entrepreneurs, teams develop and apply financing strategies for the prelaunch and launch of new ventures. **Prerequisite(s):** *MGT 320 and MGT 471; or departmental permission.*

MGT 475. Managing and Retaining Human Capital

Credits 3.00 PeopleSoft Course ID 008202 Grading Basis GRD

This course provides an in-depth study of two major aspects of HR policy and practice: performance management and compensation systems. Students participate in applied exercises and projects that focus on best practices in performance management and performance appraisal systems. The design of compensation and benefits systems is studied as a means to effectively retain workers. **Prerequisite(s):** *MGT 365 and Management major.*

MGT 480. Organizational Structure and Change

Credits 3.00 PeopleSoft Course ID 006914 Grading Basis GRD

Examines the theory and research underlying the design of complex organizations. Takes a macro approach to the study of organizations, placing particular emphasis upon the interaction between an organization and its environment and the impact that the environment has on organizational design, structure and processes. **Prerequisite(s):** *COB 300 and management major.*

MGT 481. Negotiation and Dispute Resolution

Credits 3.00 PeopleSoft Course ID 001973 Grading Basis GRD

The purpose of this course is to develop an understanding and effective improvement of participants' skills in the areas of both business and interpersonal negotiations. Through case-based exercises, attention will be given to various strategies for negotiation including distributive, integrative, intra-organizational, and multi-lateral bargaining. Additional applications include how negotiation skills can serve as tools for conflict resolution in the workplace and broader life experiences. **Prerequisite(s):** *COB 300 and senior standing.*

MGT 490. Special Studies in Management

Credits 1.00 - 3.00 PeopleSoft Course ID 001659 Grading Basis GRD

Designed to give capable students in management an opportunity to complete independent study under faculty supervision. Prerequisite: Management major and senior standing; recommendation of the instructor and written permission of the director prior to registration. **Prerequisite(s):** *Management major and senior standing (90 hours); recommendation of the instructor and written permission of the director prior to enrollment.*

MGT 494. Management Internship

Credits 3.00 PeopleSoft Course ID 001703 Grading Basis GRD

A course providing an opportunity to work in and with local industry to gain insight into the real side of modern management. **Prerequisite(s):** *Management major and permission of the internship coordinator prior to enrollment.*

MGT 498. Special Topics in Management

Credits 1.00-3.00 PeopleSoft Course ID 003237 Grading Basis GRD

This course is designed to allow explorations of areas of current topical concern or to exploit special situations. Course content will vary. For current course content consult your adviser. **Prerequisite(s):** *COB 300 and management major; or departmental permission.*

MGT 499A. Honors

Credits 1.00 PeopleSoft Course ID 005791 Grading Basis GRD

Year course. See catalog description entitled "Graduation with Distinction" and "Graduation with Honors."

MGT 499B. Senior Honors Project

Credits 3.00 PeopleSoft Course ID 001401 Grading Basis GRD

Year course. See catalog description entitled "Graduation with Distinction" and "Graduation with Honors."

MGT 499C. Honors Thesis

Credits 2.00 PeopleSoft Course ID 010338 Grading Basis GRD

Year course. See catalog description entitled "Graduation with Distinction" and "Graduation with Honors."

Marketing

MKTG 380. Principles of Marketing

Credits 3.00 PeopleSoft Course ID 003802 Grading Basis GRD

As a discipline that focuses on creating, communicating and delivering value for the consumer, marketing is essential for the success of both for-profit and nonprofit organizations and individual ideas. Students learn the key elements of marketing such as developing and distributing products, branding, pricing, and designing promotions. Students then use their understanding of the key

concepts and tools to solve real-world marketing problems. **Prerequisite(s):** *Junior standing.*

MKTG 384. Integrated Marketing Communications

Credits 3.00 PeopleSoft Course ID 007725 Grading Basis GRD

Integrated marketing communications includes advertising, sales promotions, packaging, public relations, publicity, personal selling, direct marketing and event sponsorship. Students will be involved in creating, planning, implementing and evaluating client-oriented projects by developing an integrated marketing communication campaign. **Prerequisite(s):** *COB 300 or permission of the academic unit head. Open to Marketing and International Business majors only.*

MKTG 385. Consumer Behavior

Credits 3.00 PeopleSoft Course ID 001769 Grading Basis GRD

This course deals with the behavioral science concepts of individual and group behavior of consumers. The course will stress the application of buyer behavior research to marketing management. **Prerequisite(s):** *COB 300 or permission of the academic unit head. Open to Marketing and International Business majors only.*

MKTG 386. Services Marketing

Credits 3.00 PeopleSoft Course ID 005213 Grading Basis GRD

Application of marketing principles to the services sector. The course focuses on review of customer demand for and assessment of services; the employee/customer interface; services operation management; review of the services marketing mix; and development of marketing plans for service organizations. **Prerequisite(s):** *COB 300 or permission of the academic unit head.*

MKTG 388. Omnichannel Retailing

Credits 3.00 PeopleSoft Course ID 008536 Grading Basis GRD

This course examines retailing from an omnichannel approach that includes both online and offline strategies and tools. Strategies to create an integrated, cohesive approach that allows consumers to move between channels seamlessly will be evaluated. **Prerequisite(s):** *COB 300 or permission of the academic unit head.*

MKTG 405. Survey Research

Credits 3.00 PeopleSoft Course ID 002747 Grading Basis GRD

This course covers techniques and principles, skills and activities that are required to conduct an effective survey project. The course will cover survey planning, survey methods, sampling, survey instrument design, data collection and analysis, and survey reporting. Survey findings are linked to future marketing decision making. **Prerequisite(s):** *COB 300 or permission of the academic unit head.*

MKTG 410. Social Media Marketing

Credits 3.00 PeopleSoft Course ID 014043 Grading Basis GRD

The class covers the foundations of social media including the predominantly used social media platforms, when and how to use each effectively, and a glimpse into the social psychology behind interactions within and across social media platforms. **Prerequisite(s):** *MKTG 384.*

MKTG 430. Professional Selling

Credits 3.00 PeopleSoft Course ID 004422 Grading Basis GRD

This course provides an understanding of many aspects of personal selling including preparing for selling, selling techniques and the role of selling in our society. **Prerequisite(s):** *COB 300 or permission of the academic unit head. Open to Marketing and International Business majors only.*

MKTG 450. Business Marketing

Credits 3.00 PeopleSoft Course ID 006626 Grading Basis GRD

An analysis of the policies and procedures in marketing to business buyers.

The course provides emphasis on special problems connected with the segmentation and target marketing, purchase, distribution, promotion, and development of business-to-business goods and services. **Prerequisite(s):** *COB 300 or permission of the academic unit head.*

MKTG 455. Sales Leadership

Credits 3.00 PeopleSoft Course ID 013905 Grading Basis GRD

Sales leadership guides students through the various leadership styles and the adoption of the appropriate leadership style for various contexts. The use of sales management skills, coaching and mentoring in a professional sales environment are covered. The course includes experiential use of these skills by providing the opportunity to lead a team of students enrolled in MKTG 430. **Prerequisite(s):** *COB 300 and MKTG 430, or permission of the instructor.*

MKTG 460. Global Marketing

Credits 3.00 PeopleSoft Course ID 008455 Grading Basis GRD

Examines marketing in international environments, including foreign entry, local marketing in individual countries and global or standardized marketing across many countries. Emphasis is placed on cultural, economic and strategic variables in deciding how to enter and compete in various markets.

Prerequisite(s): *COB 300 or permission of the academic unit head.*

MKTG 462. International Logistics

Credits 3.00 PeopleSoft Course ID 013829 Grading Basis GRD

The goal of the course is to tie the international logistics concepts and tools to real world situations, preparing students for dynamic decision-making and problem solving. For marketing majors, this elective would complement such courses as global marketing, business-to-business marketing, retail management and marketing analytics and provide students with an understanding of one of the key elements of marketing: place/physical distribution, from an international perspective. **Prerequisite(s):** *COB 300 (for Marketing majors), or COB 300 and admission to the Global Supply Chain Management minor (for all other COB majors), or ISAT 211 and admission to the Global Supply Chain Management minor (for CISE majors).*

MKTG 465. CRM Technology for Sales Professionals

Credits 3.00 PeopleSoft Course ID 013485 Grading Basis GRD

The objective of this course is to introduce students to customer relationship management (CRM) technologies used in professional selling. Students will investigate sources of customer data, data management technology, and the use of customer information for professional selling. The course develops technology skills applicable in carrying out sales strategies. **Prerequisite(s):** *MKTG 430.*

MKTG 466. Advanced Professional Selling

Credits 3.00 PeopleSoft Course ID 013484 Grading Basis GRD

The purpose of this class is to build on the selling skills first learned in MKTG 430. It will focus on enhancing existing skills and learning new ones in order to even better prepare students for a successful career in sales. In addition, students may be selected to compete in regional or national sales competitions during the semester. **Prerequisite(s):** *MKTG 430.*

MKTG 470. Strategic Internet Marketing

Credits 3.00 PeopleSoft Course ID 005990 Grading Basis GRD

Studies the culture and demographics of the Internet and examines online business strategies. Students will learn the hardware and software tools necessary for Internet commerce, identify appropriate target segments, develop product opportunities, price structures and distribution channels over the Internet and execute marketing strategy in computer-mediated environments.

Prerequisite(s): COB 300 and MKTG 384 or permission of the academic unit head.

MKTG 477. Digital Marketing Practicum

Credits 3.00 PeopleSoft Course ID 013374 Grading Basis GRD

With an applied focus, this course introduces students to some of the most important and fastest growing sectors in digital marketing. Students apply marketing theories in a uniquely applied manner as they become active learners involved in online marketing campaigns, facing real pressures similar to those in the professional workplace (i.e., account management, client relationships, financial constraints, market competition, time limitations, technology, etc.). Student teams will plan and execute paid search, display advertising, paid social or other campaign types for actual clients. Throughout their campaigns, students continually make decisions based on real world data and market conditions. **Prerequisite(s):** MKTG 384 and permission of the instructor.

MKTG 480. Product Development and Management

Credits 3.00 PeopleSoft Course ID 007455 Grading Basis GRD

The process of developing new products will be developed and explored. The marketing tasks which are unique to this operation will be investigated. An understanding of the marketing management of products throughout their life cycles will complete the course. **Prerequisite(s):** COB 300 or permission of the academic unit head.

MKTG 482. Marketing Analytics

Credits 3.00 PeopleSoft Course ID 004297 Grading Basis GRD

This course focuses on the use of information technology and marketing metrics to increase marketing productivity. Students learn how to evaluate marketing strategies and performance using database queries and statistical analysis. Information technologies are applied in market segmentation and target marketing, lifetime value analysis and RFM (recency, frequency and monetary value) analysis. **Prerequisite(s):** COB 300 or permission of the academic unit head.

MKTG 485. Marketing Management

Credits 3.00 PeopleSoft Course ID 006046 Grading Basis GRD

Case studies are used to develop analytical and decision-making skills. Knowledge gained from previous course work is applied to actual circumstances faced by marketing managers in private, public, profit and not-for-profit organizations. Extensive preparation of case materials outside of class provides the basis for case presentations and discussion of case situations in class. **Prerequisite(s):** COB 300, MKTG 384, MKTG 385 and senior standing required.

MKTG 490. Special Studies in Marketing

Credits 1.00 - 3.00 PeopleSoft Course ID 000638 Grading Basis GRD

Designed to give capable students in marketing an opportunity to complete independent study under faculty supervision. **Prerequisite(s):** GPA of 2.8, instructor recommendation and department head approval prior to registration.

MKTG 494. Marketing Internship

Credits 3.00 - 6.00 PeopleSoft Course ID 002915 Grading Basis GRD

A course providing an opportunity to work in and deal with local industry to gain insight into the realities of modern business. **Prerequisite(s):** COB 300, minimum cumulative GPA of 2.80, senior standing, recommendation of the internship coordinator and approval of the academic unit head prior to registration.

MKTG 498. Special Topics in Marketing

Credits 1.00-3.00 PeopleSoft Course ID 008049 Grading Basis GRD

This course is designed to allow explorations of areas of current topical concern or to exploit special situations. Course content will vary. For current course content consult your adviser. **Prerequisite(s):** Permission of the instructor.

MKTG 499A. Honors

Credits 1.00 PeopleSoft Course ID 001434 Grading Basis GRD

MKTG 499B. Senior Honors Project

Credits 2.00 PeopleSoft Course ID 003166 Grading Basis GRD

MKTG 499C. Senior Honors Project

Credits 3.00 PeopleSoft Course ID 006702 Grading Basis GRD

Materials Science

MATS 375. An Introduction to Materials Science

Cross listed with: CHEM 375, PHYS 375

Credits 3.00 PeopleSoft Course ID 007865 Grading Basis GRD

An introduction to materials science with emphasis on general properties of materials. Topics will include crystal structure, extended and point defects, and mechanical, electrical, thermal and magnetic properties of metals, ceramics, electronic materials, composites and organic materials. **Prerequisite(s):** CHEM 131 and PHYS 150, PHYS 250, ISAT 212 or permission of the instructor.

MATS 498R. Undergraduate Materials Science Research

Credits 1.00 - 3.00 PeopleSoft Course ID 011034 Grading Basis GRD

Research in a selected area of materials science arranged with and approved by a faculty research adviser. **Prerequisite(s):** Study proposal must be approved by research adviser and director of Center for Materials Science prior to registration.

Mathematics

MATH 103. The Nature of Mathematics [C3QR]

Credits 3.00 PeopleSoft Course ID 000814 Grading Basis GRD

Topics such as geometry, computing, algebra, number theory, history of mathematics, logic, probability, statistics, modeling and problem solving intended to give students insight into what mathematics is, what it attempts to accomplish and how mathematicians think. May be used for general education credit.

MATH 105. Quantitative Literacy and Reasoning [C3QR]

Credits 3.00 PeopleSoft Course ID 012695 Grading Basis GRD

Applications and interpretation of numerical information in context. Selection and use of appropriate tools: scientific notation, percentages, descriptive summaries, absolute and relative changes, graphs, normal and exponential population models, and interpretations of bivariate models. Making informed decisions and effectively communicating them. Identifying limitations of information sources, assessing reasonableness of results, and basic concepts of confidence amid uncertainty. Not open to majors in mathematics or statistics. May be used for general education credit. Not open to students who have previously earned credit in courses requiring MATH 105 competency except with consent of the Mathematics and Statistics department head.

MATH 107. Fundamentals of Mathematics I [C3QR]

Credits 3.00 PeopleSoft Course ID 007174 Grading Basis GRD

MATH 107 and MATH 108, along with MATH 207, form a sequence that covers the topics of sets, logic, numeration systems, development of real numbers, number operations, number theory, geometry, measurement, algebra, functions, probability and data analysis. Sequence is required for early childhood, elementary, or middle school teacher licensure. May be used for general education credit.

MATH 108. Fundamentals of Mathematics II

Credits 3.00 PeopleSoft Course ID 006879 Grading Basis GRD

MATH 107 and MATH 108, along with MATH 207, form a sequence that covers the topics of sets, logic, numeration systems, development of real numbers, number operations, number theory, geometry, measurement, algebra, functions, probability and data analysis. Sequence is required for early childhood, elementary, or middle school teacher licensure. **Prerequisite(s):** *MATH 107 with a grade of "C-" or better and a passing score on Basic Skills Test.*

MATH 110. Mathematics for Elementary and Middle School Teachers I [C3QR]**Credits 4.00 PeopleSoft Course ID 014383 Grading Basis GRD**

MATH 110 and MATH 210 form a sequence that is designed for future elementary and middle school teachers to develop mathematical knowledge for teaching by deeply examining concepts in mathematics that include number sense, number systems (whole numbers, integers, rational numbers and real numbers), meanings and properties of operations, ratio and proportion, functions and algebra, number theory, geometry, measurement, probability, and statistics. Problem-solving, reasoning, representations, connections and communication form the foundation through which learning will take place. MATH 110 may be used for General Education credit in quantitative reasoning. **Prerequisite(s):** *Priority registration will be given to Inclusive Early Childhood Education, Elementary Education, Middle Grades Education, and Special Education majors. Other majors may enroll during open enrollment.*

MATH 111. Mathematics Seminar for Elementary and Middle School Teachers**Credits 1.00 PeopleSoft Course ID 014596 Grading Basis GRD**

This course is designed for future elementary and middle school teachers to develop mathematical knowledge for teaching by deeply examining concepts in mathematics including: number sense, number systems (whole numbers, integers, rational numbers and real numbers), and meaning and properties of operations. These mathematical concepts will be explored through the lens of the Standards of Mathematical Practice. Problem solving, reasoning, representation, connections and communication form the foundation through which learning will take place. **Prerequisite(s):** *Inclusive Early Childhood Education, Elementary Education, Middle Grades Education or Special Education majors or Mathematics for Middle Grades Education minor; and minimum grade of "C-" in MATH 110.*

MATH 135. Elementary Functions**Credits 4.00 PeopleSoft Course ID 006223 Grading Basis GRD**

Algebraic, exponential, logarithmic and trigonometric functions; matrices and matrix solutions to systems of linear equations; vectors. Not open to students who have previously earned credit in MATH 155, 156, 205 or 235, except with the consent of the department head.

MATH 155. College Algebra**Credits 3.00 PeopleSoft Course ID 008654 Grading Basis GRD**

Polynomial, rational, exponential and logarithmic functions and applications, systems of equations and inequalities, sequences. An appropriate ALEKS placement score is required in order to enroll. **Prerequisite(s):** *Demonstration of proficiency in algebra at an intermediate level. A test is required to determine placement in MATH 155. An appropriate ALEKS placement score is required in order to enroll. Not open to students who have previously earned credit in MATH 135, MATH 205, MATH 232 or MATH 235.*

MATH 156. College Algebra**Credits 3.00 PeopleSoft Course ID 003565 Grading Basis GRD**

Covers same topics as MATH 155. MATH 156 will meet five times a week for students requiring more instructional time. **Prerequisite(s):** *Demonstration of proficiency in algebra at an intermediate level. A test is required to determine*

placement in MATH 155 or MATH 156. Not open to students who have previously earned credit in MATH 135, MATH 155, MATH 205, MATH 231, MATH 232, or MATH 235.

MATH 167. Topics in Mathematics**Credits 1.00 - 3.00 PeopleSoft Course ID 000819 Grading Basis GRD**

Topics or projects in mathematics which are of interest to the lower-division student. May be repeated for credit when course content changes. Topics or projects selected may dictate prerequisites. Students should consult the instructor prior to enrolling for this course.

MATH 199. Algebra/Precalculus Gateway**Credits 1.00 PeopleSoft Course ID 013196 Grading Basis GRD**

Review of fundamental mathematics required to be successful in MATH 205 or MATH 231, including graphs of functions, factoring, simplifying, solving equations and inequalities, and exponential/logarithmic/trigonometric functions. Self-paced study with required proctored tests. Students needing more instruction should register for MATH 155 instead. **Corequisite(s):** *MATH 231 or MATH 205 with appropriate calculus placement score.*

MATH 205. Introductory Calculus I [C3QR]**Credits 3.00 PeopleSoft Course ID 010305 Grading Basis GRD**

Topics from differential and integral calculus with applications to the social, behavioral or life sciences and business or management. **Prerequisite(s):** *MATH 135 or MATH 155 or MATH 156 or sufficient score on the mathematics placement exam. Not open to mathematics or physics majors or to students who have already earned credit in MATH 232 or MATH 235.*

MATH 207. Fundamentals of Mathematics III**Credits 3.00 PeopleSoft Course ID 010993 Grading Basis GRD**

A continuation of topics listed in the MATH 107-108 description will be covered. The MATH 107-108-207 sequence fulfills the requirements for licensure of prospective early childhood, elementary, or middle school teachers. **Prerequisite(s):** *MATH 107 and MATH 108 with a grade of "C-" or better.*

MATH 210. Mathematics for Elementary and Middle School Teachers II**Credits 4.00 PeopleSoft Course ID 014382 Grading Basis GRD**

MATH 110 and MATH 210 form a sequence that is designed for future elementary and middle school teachers to develop mathematical knowledge for teaching by deeply examining concepts in mathematics that include number sense, number systems (whole numbers, integers, rational numbers and real numbers), meanings and properties of operations, ratio and proportion, functions and algebra, number theory, geometry, measurement, probability, and statistics. Problem solving, reasoning, representations, connections and communication form the foundation through which learning will take place. The MATH 110/MATH 210 sequence is restricted to those seeking teaching licensure in the PreK-8 range. **Prerequisite(s):** *Inclusive Early Childhood Education, Elementary Education, Middle Grades Education or Special Education majors only. Must earn "C-" or better in MATH 110.*

MATH 220. Elementary Statistics [C3QR]**Credits 3.00 PeopleSoft Course ID 005056 Grading Basis GRD**

Descriptive statistics, frequency distributions, sampling, estimation and testing of hypotheses, regression, correlation and an introduction to statistical analysis using computers. May be used for general education credit.

Prerequisite(s): *MATH 105 with a grade of "C-" or better or sufficient score on the Mathematics Placement Exam.*

MATH 220H. Elementary Statistics - Honors [C3QR]**Credits 3.00 PeopleSoft Course ID 010912 Grading Basis GRD**

Descriptive statistics, frequency distributions, sampling, estimation and testing of hypotheses, regression, correlation and an introduction to statistical analysis using computers. May be used for general education credit. **Prerequisite(s):**

Honors Students

MATH 227. Discrete Structures I

Cross listed with: CS 227

Credits 3.00 PeopleSoft Course ID 011368 Grading Basis GRD

An introduction to discrete mathematical structures including functions, relations, sets, logic, matrices, elementary number theory, proof techniques, basics of counting, graphic theory, discrete probability, digital logic, finite state machines, integer and floating point representations. **Prerequisite(s):** CS 159.

Corequisite(s): CS 159.

MATH 229. Introduction to Applied Statistics Using R [C3QR]

Credits 3.00 PeopleSoft Course ID 014010 Grading Basis GRD

An introduction to applied statistics that is more in-depth than MATH 220 and is encouraged for students majoring or minoring in STEM fields. Descriptive statistics, data collection, frequency distributions, sampling distributions and the Central Limit Theorem, estimation, confidence intervals, testing of hypotheses, simple linear regression, correlation, and chi-square test of independence are covered. Emphasis is on the analysis and interpretation of real data in context. Uses the R programming language. **Prerequisite(s):** *Sufficient statistics and calculus placement scores. The calculus placement score requirement may be waived for students with "C-" or better in MATH 231.*

Not open to students with credit in MATH 220, MATH 220H, MATH 318, MATH 329 or equivalent.

MATH 231. Calculus with Functions I [C3QR]

Credits 3.00 PeopleSoft Course ID 010879 Grading Basis GRD

MATH 231 and MATH 232 form a sequence that combines first-semester calculus with algebra and trigonometry. The sequence is designed for students whose pre-calculus skills are not strong enough for MATH 235. Calculus material in MATH 231 includes limits and derivatives of algebraic functions and their applications. May be used for general education credit. *Not open to students who have already earned credit in MATH 234 or MATH 235.*

Prerequisite(s): *MATH 155, MATH 156 or sufficient score on the Mathematics Placement Exam. MATH 231-MATH 232 together are equivalent to MATH 235 for all prerequisites.*

MATH 232. Calculus with Functions II

Credits 3.00 PeopleSoft Course ID 010880 Grading Basis GRD

A continuation of MATH 231. Calculus topics include limits and derivatives of transcendental functions, the theory of integration and basic integration techniques. NOTE: MATH 231-232 together are equivalent to MATH 235 for all prerequisites. Not open to students who have already earned credit in MATH 234 or MATH 235. **Prerequisite(s):** *MATH 231 with a grade of "C-" or better.*

MATH 233. Calculus with Modeling I [C3QR]

Credits 3.00 PeopleSoft Course ID 013627 Grading Basis GRD

MATH 233 and MATH 234 form a sequence that combines first-semester calculus with pre-calculus for students with skills not strong enough for MATH 235. Calculus is motivated by static and dynamic models in the context of scientific applications. MATH 233 includes limits, continuity, summation, and the definite integral as accumulation of change and as the limit of Riemann sums. May be used for general education credit. **Prerequisite(s):** *MATH 155, MATH 156 or sufficient score on the Mathematics Placement Exam. MATH 233-MATH 234 together are equivalent to MATH 235 for all prerequisites. Not open to students who have already earned credit for MATH 232 or MATH 235.*

MATH 234. Calculus with Modeling II

Credits 3.00 PeopleSoft Course ID 013628 Grading Basis GRD

MATH 233 and MATH 234 form a sequence that combines first-semester calculus with pre-calculus for students with skills not strong enough for MATH 235. Calculus is motivated by static and dynamic models in the context of scientific applications. MATH 234 includes differentiation and antidifferentiation, including trigonometric functions, as well as the fundamental theorem of calculus. **Prerequisite(s):** *MATH 233 with a grade of "C-" or better. Not open to students who have already earned credit for MATH 235. MATH 233-234 together are equivalent to MATH 235 for all prerequisites. Not open to students who have already earned credit for MATH 235.*

MATH 235. Calculus I [C3QR]

Credits 4.00 PeopleSoft Course ID 006620 Grading Basis GRD

Differential and integral calculus of functions of one variable. Sequences and infinite series. MATH 235 may be used for general education credit. MATH 235 is not open to students who have already earned credit in MATH 232 or MATH 234. **Prerequisite(s):** *Sufficient score on the Mathematics Placement Exam.*

MATH 236. Calculus II

Credits 4.00 PeopleSoft Course ID 001884 Grading Basis GRD

Differential and integral calculus of functions of one variable. Sequences and infinite series. **Prerequisite(s):** *MATH 232 or MATH 234 or MATH 235 with a grade of "C-" or better.*

MATH 237. Calculus III

Credits 4.00 PeopleSoft Course ID 004283 Grading Basis GRD

Vectors. Multivariate calculus. **Prerequisite(s):** *MATH 236 with a minimum grade of "C-."*

MATH 238. Linear Algebra with Differential Equations

Credits 4.00 PeopleSoft Course ID 000344 Grading Basis GRD

Matrices; determinants; vector spaces; linear transformations; eigenvalues and eigenvectors; separable, exact and linear differential equations; and systems of linear differential equations. **Prerequisite(s):** *MATH 236. Not open to students with credit in MATH 300 or MATH 336 without departmental permission.*

MATH 245. Discrete Mathematics

Credits 3.00 PeopleSoft Course ID 009893 Grading Basis GRD

Logic, set theory, relations and functions, mathematical induction and equivalent forms, recurrence relations, counting techniques. **Prerequisite(s):** *MATH 236. Corequisite(s):* *MATH 236.*

MATH 248. Computers and Numerical Algorithms

Credits 4.00 PeopleSoft Course ID 006013 Grading Basis GRD

Programming in a high-level computer language. Applications of numerical algorithms to problems basic to areas such as mathematics, the sciences, and economics and finance. This course is not open to students who have previously earned credit in MATH/CS 448. **Prerequisite(s):** *MATH 236. Corequisite(s):* *MATH 236 and permission of instructor.*

MATH 250. Programming for Data Science

Credits 3.00 PeopleSoft Course ID 014598 Grading Basis GRD

This course is an introduction to programming for data science using a modern programming language.

MATH 251. Database Queries

Credits 3.00 PeopleSoft Course ID 014599 Grading Basis GRD

This course provides an introduction to relational database queries. Students will learn about organizing, cleaning, summarizing and transforming data in preparation for exploration, visualization and analysis.

MATH 268. Data Analysis and Visualization

Credits 3.00 PeopleSoft Course ID 013896 Grading Basis GRD

This course is intended to give students hands-on experience on the basics of the data analysis techniques using R. It will focus on data management, data visualization, data exploration using descriptive data summaries, the basics of model building and the basics of inference. Topics include data management (creating data frames, splitting data, efficient data search); exploratory data analysis; data visualization; major distributions (univariate and multivariate); numerical summaries and outlier detections; and the basics of dimension reduction using principle component analysis and exploratory factor analysis.

Prerequisite(s): MATH 220 or MATH 229 or (both MATH 318 and permission of instructor).

MATH 285. Data Analysis

Credits 4.00 PeopleSoft Course ID 007473 Grading Basis GRD

Topics include experimental and survey design, distributions, variation, chance, sampling variation, computer simulation, bootstrapping, estimation and hypothesis testing using real data generated from classroom experiments and large databases. *Not open to students who have already earned credit in MATH 220, MATH 229, MATH 318 or MATH 329.* **Prerequisite(s):** MATH 206, MATH 236 or permission of the instructor.

MATH 297. Undergraduate Research

Credits 1.00 - 4.00 PeopleSoft Course ID 013401 Grading Basis GRD

Students pursue research in a selected area of mathematics and/or statistics. Student must make arrangements with a supervising instructor prior to registration. Course may be repeated.

MATH 300. Linear Algebra

Credits 3.00 PeopleSoft Course ID 005339 Grading Basis GRD

Students will explore vector spaces, linear transformations, matrices, determinants, systems of linear equations, and eigenvalues and eigenvectors.

Prerequisite(s): MATH 232 or MATH 235; *not open for credit to students with credit in MATH 238.*

MATH 304. Principles of Algebra

Credits 3.00 PeopleSoft Course ID 010741 Grading Basis GRD

This course covers algebraic structures, number systems, matrices, groups, rings, factors and solutions to equations, and graph theory. **Prerequisite(s):** *Minimum grade of "C-" in MATH 210.*

MATH 305. Principles of Geometry

Credits 3.00 PeopleSoft Course ID 010881 Grading Basis GRD

This course covers finite geometries, geometric transformations, constructions, geometry of inversion, projective geometry and non-Euclidean geometry.

Prerequisite(s): *Minimum grade of "C-" in MATH 210.*

MATH 306. Principles of Analysis

Credits 3.00 PeopleSoft Course ID 010996 Grading Basis GRD

This course covers sequences, discrete calculus and difference equations, derivatives and integrals, and concepts of differential equations and applications. **Prerequisite(s):** *Minimum grade of "C-" in MATH 210.*

MATH 307. Principles of Probability and Statistics

Credits 3.00 PeopleSoft Course ID 010997 Grading Basis GRD

This course covers descriptive statistics, measures of central tendency and dispersion, correlation, probability, probability distributions, and statistical inference. **Prerequisite(s):** *Minimum grade of "C-" in MATH 210.*

MATH 309. SAS Programming and Data Management

Credits 3.00 PeopleSoft Course ID 011244 Grading Basis GRD

Use of statistical software to manage, process and analyze data. Writing of statistical programs to perform simulation experiments. **Prerequisite(s):** *Prerequisite: MATH 220, MATH 229, MATH 318 or equivalent.*

MATH 310. Elementary Number Theory

Credits 3.00 PeopleSoft Course ID 008770 Grading Basis GRD

Properties of integers and prime numbers, divisibility, congruence, residues and selected topics. **Prerequisite(s):** MATH 245 or consent of the instructor.

MATH 315. Real Number System

Credits 3.00 PeopleSoft Course ID 005793 Grading Basis GRD

A development of the real number system through a systematic approach to the natural numbers, integers, rationals and irrationals. **Prerequisite(s):** MATH 245 or consent of the instructor.

MATH 318. Introduction to Probability and Statistics

Credits 4.00 PeopleSoft Course ID 005099 Grading Basis GRD

This class covers descriptive statistics, counting, probability axioms, discrete and continuous univariate random variables, expected values of random variables and sums of independent random variables, and sampling distributions. It also covers the Central Limit Theorem, single and two sample inference for proportions and means, chi-square test of independence, simple linear regression and correlation. *Not open to students with credit in MATH 229 or MATH 329.* **Prerequisite(s):** MATH 236.

MATH 321. Analysis of Variance and Experimental Design

Credits 3.00 PeopleSoft Course ID 009404 Grading Basis GRD

Introduction to basic concepts in statistics with applications of statistical techniques including estimation, test of hypothesis, analysis of variance and topics in experimental design. **Prerequisite(s):** MATH 220, MATH 229, MATH 318 or equivalent.

MATH 322. Applied Linear Regression

Credits 3.00 PeopleSoft Course ID 004655 Grading Basis GRD

Introduction to basic concepts and methods in regression analysis and the application of these models to real-life situations. **Prerequisite(s):** MATH 220, MATH 229, MATH 318 or equivalent.

MATH 324. Applied Nonparametric Statistics

Credits 3.00 PeopleSoft Course ID 005997 Grading Basis GRD

Methods of analyzing data from non-normal populations including binomial tests, contingency tables, use of ranks, Kolmogorov-Smirnov type statistics and selected topics. **Prerequisite(s):** MATH 220, MATH 229, MATH 318 or equivalent.

MATH 325. Survey Sampling Methods

Credits 3.00 PeopleSoft Course ID 010099 Grading Basis GRD

Theory and practice of sampling including stratified random samples, discussion of simple random samples, cluster sampling, estimating sample size, ratio estimates, subsampling, two-state sampling and analysis of sampling error. **Prerequisite(s):** MATH 220, MATH 229, MATH 318 or equivalent.

MATH 326. Statistical Quality Control

Credits 3.00 PeopleSoft Course ID 000522 Grading Basis GRD

Uses and concepts of probability and sampling procedures. Acceptance sampling by attributes and variables, Shewhart concepts of process control, control chart process capability studies, reliability and life testing. Design of sampling plans. **Prerequisite(s):** MATH 318.

MATH 327. Categorical Data Analysis

Credits 3.00 PeopleSoft Course ID 011245 Grading Basis GRD

Exact inference for population proportions, comparison of population proportions for independent and dependent samples, two- and three-way contingency tables, Chi-square tests of independence and homogeneity, Chi-square goodness-of-fit tests, and Poisson and logistic regression.

Prerequisite(s): MATH 220, MATH 229, MATH 318 or equivalent.

MATH 328. Time Series Analysis

Cross listed with: FIN 328

Credits 3.00 PeopleSoft Course ID 010125 Grading Basis GRD

Regression and exponential smoothing methods for forecasting nonseasonal and seasonal time series, stochastic processes, Box-Jenkins' autoregressive and moving average models. **Prerequisite(s):** *MATH 238 or MATH 300; and MATH 318 or MATH 329.*

MATH 329. Introduction to Probability and Theoretical Statistics**Credits 3.00 PeopleSoft Course ID 014013 Grading Basis GRD**

This course covers counting, probability axioms, discrete and continuous univariate random variables, expected values of random variables and sums of independent random variables. It also discusses theoretical underpinnings of sampling distributions and the Central Limit Theorem, computer simulation, two-sample estimation and inference for proportions and means, and estimation and inference including verification of assumptions in simple linear regression. Uses the R programming language. **Prerequisite(s):** *MATH 236 and "C-" or better in MATH 229. MATH 220 with a grade of "B-" or better may be substituted for MATH 229 by permission if student has suitable experience with R. Not open to students with credit in MATH 318.*

MATH 336. Elementary Differential Equations**Credits 3.00 PeopleSoft Course ID 003418 Grading Basis GRD**

Development of techniques for obtaining, analyzing and graphing solutions to differential equations, with emphasis on first and second order equations.

Prerequisite(s): *MATH 236; Not open for credit to students with credit in MATH 238*

MATH 337. Methods of Applied Calculus**Credits 3.00 PeopleSoft Course ID 001693 Grading Basis GRD**

Laplace transforms, power series and their application to differential equations. Vector differential and integral calculus; parametric curves; coordinate systems; line, surface and volume integrals; and gradient, divergence, and curl including the theorems of Green, Stokes and Gauss. **Prerequisite(s):** *MATH 237; and MATH 238 or MATH 336 .*

MATH 340. Operations Research I**Credits 3.00 PeopleSoft Course ID 004084 Grading Basis GRD**

This course will cover linear and nonlinear optimization with an emphasis on applications in the sciences, economics and social sciences. Techniques studied include the simplex, Newton, and Lagrange methods and Kuhn-Tucker theory. Software packages will be used to implement these methods.

Prerequisite(s): *MATH 248 or permission of instructor.*

MATH 341. Non-Linear Dynamics and Chaos

Cross listed with: *PHYS 341*

Credits 3.00 PeopleSoft Course ID 001623 Grading Basis GRD

Introductory study of nonlinear dynamics and chaos intended primarily for upper-level undergraduates in science or mathematics. Topics include stability, bifurcations, phase portraits, strange attractors, fractals, and selected applications of nonlinear dynamics in pure and applied science. Computers may be utilized for simulations and graphics. **Prerequisite(s):** *MATH 238 or (MATH 300 and MATH 336); and MATH 248*

MATH 342. Mathematical Models in Biology

Cross listed with: *BIO 342*

Credits 3.00 PeopleSoft Course ID 012097 Grading Basis GRD

Introduction to dynamical models (discrete and continuous time) applied to biology. Tools of mathematical analysis from linear and nonlinear dynamics will be taught, including stability analysis of equilibrium, as well as appropriate use of software packages. Emphasis will be on model development and interpretation in the context of applications, including effective written and oral presentation. **Prerequisite(s):** *MATH 232 or MATH 235 or equivalent.*

MATH 353. Graph Theory**Credits 3.00 PeopleSoft Course ID 001763 Grading Basis GRD**

Graphs and their applications. Possible topics include trees, Euler paths and Hamiltonian circuits, planar graphs, digraphs, adjacency matrices, connectivity and coloring problems. **Prerequisite(s):** *MATH 245 or instructor consent.*

MATH 354. Introduction to Biometrics

Cross listed with: *BIO 454*

Credits 4.00 PeopleSoft Course ID 009895 Grading Basis GRD

This course discusses the role of statistics in biological research and interpretation of biological phenomena. The course will cover topics of sampling, correlation, regression analysis, tests of hypotheses, commonly observed distributions in natural populations, nonparametric tests, goodness-of-fit tests and ANOVA. In order to fully comprehend the statistical analysis of those publications, students will review approximately half a dozen publications from different fields of biology. **Prerequisite(s):** *MATH 220, MATH 229, MATH 318 or equivalent.*

MATH 358. Introduction to Machine Learning**Credits 3.00 PeopleSoft Course ID 014159 Grading Basis GRD**

This is an introductory course on machine learning with focus on regression and classification methods. The objective is to familiarize students with some basic models and algorithms for machine learning and prepare them for research or industry application of machine learning techniques. Several software libraries and publicly available datasets will be used to illustrate the application of these techniques. The emphasis will be on machine learning algorithms and application, with some broad explanation of the underlying principles. **Prerequisite(s):** *MATH 229, or MATH 220 with permission of the instructor.*

MATH 360. Complex Variables**Credits 3.00 PeopleSoft Course ID 000062 Grading Basis GRD**

Introduction to algebraic properties of complex numbers, analytic functions, harmonic functions, mappings of elementary functions, contour integration, series, residues, and poles and conformal mappings. Emphasis on computations and applications to fluid and heat flow. **Prerequisite(s):** *MATH 237.*

MATH 364. Introduction to Fluid Mechanics

Cross listed with: *PHYS 364*

Credits 4.00 PeopleSoft Course ID 003896 Grading Basis GRD

Introduces the student to the application of vector calculus to the description of fluids. The Euler equation, viscosity and the Navier-Stokes equation will be covered. **Prerequisite(s):** *MATH 237 and PHYS 260, or permission of the instructor.*

MATH 367. Introduction to Acoustics

Cross listed with: *PHYS 367*

Credits 3.00 PeopleSoft Course ID 011520 Grading Basis GRD

This course represents an introduction to sound, hearing, and vibration. Architectural, biological and environmental acoustics will also be discussed. Students will develop an ability to use mathematical models and experimental techniques to study problems in acoustics and to transfer this knowledge to analogous situations. They will also develop an ability to conduct a semester-long research or expository project and present it in written and oral form to an audience of peers. **Prerequisite(s):** *MATH 236*

MATH 368. Statistical Computing**Credits 3.00 PeopleSoft Course ID 013856 Grading Basis GRD**

This course is an intensive introduction to statistical computing with R. It intends to develop core computing skill to complement traditional course work

in statistics and lay the groundwork for further study for data analytics and data mining. The class will cover the basics of programming in R; visualization of multivariate data; generating random variables; bootstrap, jackknife, and permutation methods; Monte Carlo methods in inference; and Monte Carlo integration and variable reduction. **Prerequisite(s):** MATH 229.

MATH 395. Mathematical Finance

Cross listed with: FIN 395

Credits 3.00 PeopleSoft Course ID 008999 Grading Basis GRD

This course presents an overview of the role of mathematical concepts in financial applications. Topics include continuous time finance, optimization, numerical analysis and applications in asset pricing. **Prerequisite(s):** MATH 237 and FIN 380.

MATH 405. Securities Pricing

Cross listed with: FIN 405

Credits 3.00 PeopleSoft Course ID 003276 Grading Basis GRD

A quantitative treatment of the theory and method of financial securities pricing to include an examination of closed form pricing models such as the Black-Scholes and its various derivatives as well as numerical solution techniques such as binomial methods. **Prerequisite(s):** FIN 395 or MATH 395.

MATH 410. Advanced Calculus I

Credits 3.00 PeopleSoft Course ID 006515 Grading Basis GRD

Limits, continuity, differentiation, sequences, series, integration and selected topics. **Prerequisite(s):** MATH 238 or MATH 300; and MATH 245 or consent of the instructor.

MATH 411. Advanced Calculus II

Credits 3.00 PeopleSoft Course ID 001417 Grading Basis GRD

Limits, continuity, differentiation, sequences, series, integration and selected topics. **Prerequisite(s):** MATH 410.

MATH 415. History of Mathematics

Credits 3.00 PeopleSoft Course ID 003488 Grading Basis GRD

Topics in the history of mathematics spanning ancient times to the present. **Prerequisite(s):** MATH 245 or instructor consent.

MATH 421. Applied Multivariate Statistical Analysis

Credits 3.00 PeopleSoft Course ID 001523 Grading Basis GRD

Multivariate statistical methods with applications. Topics include canonical correlation, clustering, discriminant analysis, factor analysis, multivariate analysis of variance, multiple regression, multidimensional scaling and principal component analysis. **Prerequisite(s):** MATH 300 or MATH 238 and MATH 321 or MATH 322.

MATH 423. Stochastic Process

Credits 3.00 PeopleSoft Course ID 002767 Grading Basis GRD

Sequences and classes of random variables. Applications to physical, biological, social and management sciences. Topics include Markov chains, branching processes, the Poisson process, queuing systems and renewal processes. **Prerequisite(s):** MATH 238 or MATH 300; and MATH 318 or MATH 329.

MATH 424. Statistical Decision Theory

Credits 3.00 PeopleSoft Course ID 003597 Grading Basis GRD

Development and use of probability and statistics for strategic decision making with applications. Topics include decision flow diagrams, analysis of risk and risk aversion, utility theory, Bayesian statistical methods, the economics of sampling, sensitivity analysis and collective decision making. **Prerequisite(s):** MATH 318 or MATH 329.

MATH 426. Probability and Mathematical Statistics I

Credits 3.00 PeopleSoft Course ID 002787 Grading Basis GRD

Derivations and proofs of probability theorems, discrete and continuous univariate and multivariate random variables, conditional distributions, mathematical expectations, functions of random variables, moment generating functions, properties and derivation of estimators including the method of moments and maximum likelihood estimation. **Prerequisite(s):** MATH 318 or MATH 329.

MATH 427. Probability and Mathematical Statistics II

Credits 3.00 PeopleSoft Course ID 000466 Grading Basis GRD

Limiting distributions, sampling theory and distributions, theory and applications of estimation and hypothesis testing. **Prerequisite(s):** MATH 426.

MATH 428. Statistical Consulting

Credits 3.00 PeopleSoft Course ID 013686 Grading Basis GRD

Training and experience in statistical consulting emphasizing oral and written communication, interview, report writing and presentation skills. Participate in significant interdisciplinary consulting project that will require meeting with the client, creating reports summarizing the client's problem and an analysis performed by the students, and explanation of results using language that can be understood by the client. Students are required to meet with clients outside of class meeting times. **Prerequisite(s):** MATH 318 or MATH 329; MATH 321, at least junior standing and MATH 322. **Corequisite(s):** MATH 322.

MATH 429. Research Project in Statistics

Credits 1.00 - 3.00 PeopleSoft Course ID 008109 Grading Basis GRD

Experience in the design, data collection, and analysis for a survey or experiment. **Prerequisite(s):** Consent of the instructor.

MATH 430. Abstract Algebra I

Credits 3.00 PeopleSoft Course ID 006824 Grading Basis GRD

An introduction to groups, rings and fields. **Prerequisite(s):** MATH 238 or MATH 300; and MATH 245 or consent of the instructor

MATH 431. Abstract Algebra II

Credits 3.00 PeopleSoft Course ID 002393 Grading Basis GRD

An introduction to groups, rings and fields. **Prerequisite(s):** MATH 430.

MATH 434. Advanced Linear Algebra

Credits 3.00 PeopleSoft Course ID 012501 Grading Basis GRD

A proof-based linear algebra course covering such topics as vector spaces, linear transformations and matrices, eigenvalues and eigenvectors, inner product spaces, and canonical forms. **Prerequisite(s):** MATH 245 and either MATH 238 or MATH 300.

MATH 435. Introduction to Topology

Credits 3.00 PeopleSoft Course ID 004847 Grading Basis GRD

Metric spaces, limits, continuous maps and homeomorphisms, connectedness, compact topological spaces and applications. **Prerequisite(s):** MATH 238 or MATH 300 and MATH 245.

MATH 440. Fourier Analysis and Partial Differential Equations

Credits 3.00 PeopleSoft Course ID 007223 Grading Basis GRD

Elementary applied partial differential equations, the heat equation, Laplace's equation, the wave equation; Fourier series and boundary value problems. Both theory and problem-solving will be included. **Prerequisite(s):** MATH 238 or MATH 336.

MATH 441. Analysis and Dynamics of Differential Equations

Credits 3.00 PeopleSoft Course ID 002512 Grading Basis GRD

Analysis of qualitative properties and dynamics of linear and non-linear ordinary differential equations, including topics such as existence, uniqueness, phase portraits, stability and chaos, with applications in the sciences. **Prerequisite(s):** MATH 238 OR MATH 300 and MATH 336; AND MATH 245 or MATH 440 OR Instructor Permission.

MATH 448. Numerical Analysis**Cross listed with:** CS 448**Credits** 3.00 **PeopleSoft Course ID** 008254 **Grading Basis** GRD

This course is the study and analysis of algorithms used to solve nonlinear equations and systems of linear and nonlinear equations. Students will learn iterative methods for matrices and Newton-type methods as well as numerical differential and integral calculus. Students will perform programming using a high-level language and/or software packages. **Prerequisite(s):** MATH 248 or instructor permission.

MATH 449. Numerical Analysis for Differential Equations**Cross listed with:** CS 449**Credits** 3.00 **PeopleSoft Course ID** 000239 **Grading Basis** GRD

Study and analysis of numerical techniques to solve ordinary and partial differential equations, including Euler, Runge-Kutta, Picard, finite-difference and finite-element methods. Programming using a high-level language and/or software packages. **Prerequisite(s):** MATH 237; MATH 238 or MATH 336; and MATH 248.

MATH 452. Design and Analysis of Algorithms**Cross listed with:** CS 452**Credits** 3.00 **PeopleSoft Course ID** 000092 **Grading Basis** GRD

An introduction to algorithm design techniques and the mathematical analysis of algorithms. Techniques covered include divide-and-conquer, greedy, backtracking, network flow and dynamic programming. The classes P and NP are introduced and intractable problems are discussed. This is a proof-intensive course. **Prerequisite(s):** A grade of "C-" or better in CS 327 and either MATH 220 or MATH 229 or MATH 318. Students may not receive credit for both CS 412 and CS 452.

MATH 470. Connections in Mathematics**Credits** 3.00 **PeopleSoft Course ID** 011705 **Grading Basis** GRD

This course is a mathematics capstone course primarily for math majors with secondary education minors. It covers a variety of topics, each designed to develop the interconnectedness of advanced mathematics to the secondary curriculum. **Prerequisite(s):** MATH 318 or MATH 329; MATH 410, MATH 430 and MATH 475. **Corequisite(s):** MATH 318 or MATH 329; MATH 410, MATH 430 and MATH 475.

MATH 475. Fund Concepts of Geometry**Credits** 3.00 **PeopleSoft Course ID** 003598 **Grading Basis** GRD

Origin and development of Euclidean and other geometries including axiomatic systems, mathematical proof and special topics from incidence geometry.

Prerequisite(s): MATH 245 or consent of the instructor.**MATH 485. Selected Topics****Credits** 1.00 - 4.00 **PeopleSoft Course ID** 010370 **Grading Basis** GRD

Topics in advanced mathematics or statistics which are not covered in the regularly offered courses. Offered only with approval of the department head; may be repeated for credit when course content changes. **Prerequisite(s):** Permission of the instructor.

MATH 486. Independent Study**Credits** 1.00 - 3.00 **PeopleSoft Course ID** 013783 **Grading Basis** GRD

Independent study in mathematics under faculty supervision. Only offered with the consent of the department head.

MATH 497. Undergraduate Research**Credits** 1.00 - 4.00 **PeopleSoft Course ID** 009493 **Grading Basis** GRD

Students pursue advanced research in a selected area of mathematics and/or statistics. Student must make arrangements with a supervising instructor prior

to registration. Offered only with consent of the department head. Repeatable up to 6 credits.

MATH 499A. Honors**Credits** 1.00-4.00 **PeopleSoft Course ID** 002525 **Grading Basis** GRD**Prerequisite(s):** Consent of the SHP supervisor.**MATH 499B. Honors Thesis****Credits** 3.00 **PeopleSoft Course ID** 002066 **Grading Basis** GRD**MATH 499C. Honors Thesis****Credits** 2.00 **PeopleSoft Course ID** 001186 **Grading Basis** GRD

Mathematics Education

MAED 430. Teaching Mathematics in Grades K-12**Credits** 3.00 **PeopleSoft Course ID** 011177 **Grading Basis** GRD

This course provides students with knowledge, skills, and understanding to design and implement effective mathematics instruction (K-12). Focus is on the content, methods, and materials developmentally appropriate for mathematics instruction for a range of students, including diverse and special needs children. The course is based on the Principles and Standards for School Mathematics from NCTM. **Prerequisite(s):** EXED 200

Media Arts and Design

SMAD 101. Introduction to Media Arts and Design**Credits** 3.00 **PeopleSoft Course ID** 003574 **Grading Basis** GRD

Study of the historical evolution of today's media industries and career paths. Emphasis on contemporary issues affecting those industries and careers. Consideration given to emerging media, their required skills and social impacts. **Prerequisite(s):** Formal declaration for admission to the SMAD major

SMAD 150. Mediated Communication: Issues and Skills [C1CT]**Credits** 3.00 **PeopleSoft Course ID** 003450 **Grading Basis** GRD

Study of how mediated communication shapes the content, meaning and impact of spoken, written and pictorial messages. Emphasis on the skills required to integrate speech, text and imagery into mediated presentations. Consideration of issues involving the critical evaluation of mass-mediated communication, their effectiveness and influence. May be used for general education credit. May not be used for major credit. **Prerequisite(s):** If you have already completed, or are currently registered for, a Cluster One Critical Thinking class, you must secure permission to receive credit for a second Cluster One Critical Thinking class.

SMAD 201. Foundations of Visual Communication Design**Credits** 3.00 **PeopleSoft Course ID** 001917 **Grading Basis** GRD

Study of the basic computer operating systems and the principles and practices of graphic production for digital and interactive media. Focus on tools and techniques used to create graphic content for diverse media delivery systems.

Prerequisite(s): Admission to the SMAD major.**SMAD 202. Foundations of Audio-Visual Storytelling****Credits** 3.00 **PeopleSoft Course ID** 010523 **Grading Basis** GRD

Audiovisual storytelling is an experiential learning course designed to give students a foundation in creating and producing engaging stories/content utilizing a varied range of audiovisual communication/media tools and formats for distribution on multiple delivery platforms including, but not limited to, television, interactive, film, documentaries, news, commercials, radio, podcasts and web. **Prerequisite(s):** SMAD 201. **Corequisite(s):** SMAD 201.

SMAD 203. Foundations of User Experience Design**Credits** 3.00 **PeopleSoft Course ID** 013830

Study of the aesthetic principles and practices of web and interactive narrative design. Emphasis on visual communication in an interactive media context.

Prerequisite(s): SMAD 201. **Corequisite(s):** SMAD 201.

SMAD 204. Foundations of Media Storytelling and Research

Credits 3.00 PeopleSoft Course ID 014615 Grading Basis GRD Students fully admitted to SMAD prior to Sept. 1, 2023, are not eligible for this course.

This course is the study of story development across diverse media forms to enable effective, accurate and ethical storytelling. Emphasis will be on identifying diverse media forms' story goals and objectives, and on research techniques and tools to locate, identify and assess information accuracy. Attention to recognizing and evaluating media story accuracy and effective use of language. **Prerequisite(s):** Admission to SMAD major.

SMAD 210. News Reporting and Writing

Credits 3.00 PeopleSoft Course ID 009150 Grading Basis GRD

This course is the study and practice of the fundamentals of news writing, including news-gathering techniques and news style. Emphasis is placed on coverage of meetings, events and breaking stories. Consideration of writing across platforms including print, broadcast and online. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** Fully admitted SMAD majors in the Creative Advertising or Journalism concentrations and SMAD 204; for Sports Communication minors, declaration of the Sports Communication minor; or permission of the instructor.

Corequisite(s): SMAD 204.

SMAD 220. Copy Editing

Credits 3.00 PeopleSoft Course ID 003777 Grading Basis GRD

The study and practice of editing stories and visuals for publication. Focus on style, factuality, writing problems, headlines and page design. Other editing roles considered. **Prerequisite(s):** Journalism concentrators: SMAD 210 Creative Advertising concentrators: SMAD 210 or SMAD 252; or permission of instructor. **Corequisite(s):** Journalism concentrators: SMAD 210 Creative Advertising concentrators: SMAD 210 or SMAD 252; or permission of instructor.

SMAD 225. Photojournalism

Credits 3.00 PeopleSoft Course ID 006010 Grading Basis GRD

The study of visual information gathering for print media including photojournalism. Emphasis on photographic techniques and print media layout. Consideration of new visual technologies including the use of computers for electronic photo editing and design. Students must provide their own camera. **Prerequisite(s):** Admission to the SMAD major and SMAD 201 or Permission of the Instructor

SMAD 231. Writing for New Media

Credits 3.00 PeopleSoft Course ID 000491 Grading Basis GRD

Study of the principles and practices of writing for multimedia applications. Emphasis on the nature of interactivity and the relationship between text and image, sound and video. Attention to the development of multimedia presentations designed to inform, persuade and entertain. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** Admission to the SMAD major or permission of the instructor

SMAD 242. Introduction to Advertising and New Media

Credits 3.00 PeopleSoft Course ID 013437 Grading Basis GRD

This course introduces fundamentals of advertising in the new media environment. Students examine how organizations use new media to engage with consumers to achieve advertising objectives. Focus is on hands-on practice in the basic skills and processes needed to prepare multi-platform narratives. Students develop a clear understanding of what makes advertising

effective across traditional and new media and develop professional research skills. **Prerequisite(s):** Admission to the Media Arts and Design major and Creative Advertising concentration; SMAD 204, or permission of instructor.

Corequisite(s): SMAD 204.

SMAD 243. Sport Communication Techniques: Broadcasting

Cross listed with: KIN 243

Credits 3.00 PeopleSoft Course ID 013016 Grading Basis GRD

Study and practice of broadcast and A/V techniques applied in a variety of sport settings. **Prerequisite(s):** KIN 242

SMAD 244. Sport Communication Techniques: Writing and Reporting

Cross listed with: KIN 244, SCOM 244

Credits 3.00 PeopleSoft Course ID 013017 Grading Basis GRD

Basic skills of sport writing and reporting are studied and applied. Students gain experience in a variety of sports and learn and apply skills in researching, interviewing, reporting, writing columns and features involving the world of sports. **Prerequisite(s):** KIN 242.

SMAD 250. Scriptwriting

Credits 3.00 PeopleSoft Course ID 009951 Grading Basis GRD

The study of the principles and practices of writing scripts for commercial, noncommercial and corporate media applications. Emphasis on preparing dramatic and information forms for broadcast or recording. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** Admission to the SMAD major; for non-majors, admission to the cross disciplinary minor in Creative Writing; or permission of instructor.

SMAD 251. Screenplay Writing

Credits 3.00 PeopleSoft Course ID 011436 Grading Basis GRD

Introductory study of the principles and practices of screenwriting. Emphasis is placed on the basic narrative structures underlying cinematic story-telling and the development of a short film script. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** Admission to the SMAD major; for non-majors, admission to the cross disciplinary minor in creative writing; or permission of the instructor

SMAD 252. Copywriting for Advertising

Credits 3.00 PeopleSoft Course ID 013773 Grading Basis GRD

This course covers the principles and practices of developing creative copy for advertising. Students will examine how to solve client problems by writing persuasive stories. Students will focus on writing scripts for TV and radio commercials, print ads, headlines, taglines, jingles, web copy, out of home ads, new media, and social media. Emphasis will be on editing, researching and writing creative briefs and strategic plans. **Prerequisite(s):** Admission to the SMAD major and creative advertising concentration and SMAD 204 and SMAD 242. **Corequisite(s):** SMAD 204, SMAD 242.

SMAD 253. The Shooting Script: The Process of Script to Screen

Credits 3.00 PeopleSoft Course ID 014226 Grading Basis GRD

In this course, students will polish screenplays and develop them into a shooting script for video production. The work in this class involves creating a screenplay that the students will actually shoot and produce. This is a different process than simply writing a script. For example, if the script contains a scene at a swimming pool, but they do not have access to a pool as a location, students must rework the scene to make it work with available locations. The course will only be offered as part of the JMU/SVA summer study abroad program in New York. The class will satisfy the digital video and cinema concentration writing requirement and satisfy the prerequisite for SMAD 340. Advanced Screenplay Writing. **Prerequisite(s):** Admission to the SMAD major and admission to the JMU/SVA summer study abroad program in New York.

SMAD 295. Practicum in Media Arts and Design**Credits 1.00 PeopleSoft Course ID 002192 Grading Basis GRD**

Freshmen and sophomores participating in cocurricular media activities may receive one hour of credit for field work at The Breeze, WMRA-FM, the Madison Video Productions or other university-related media outlets. Students are limited to one practicum per semester. Application procedures will be available from the school prior to registration. **Prerequisite(s):** *Permission of the instructor.*

SMAD 301. The Media Arts: Culture By Design**Credits 3.00 PeopleSoft Course ID 008751 Grading Basis GRD**

This course is the study of how mediated communication molds perception and influences cultural change. Emphasis will be placed on how language and imagery, sound and music are combined in current media to create meaning. The course will consider emerging media and their implications for cultural design. **Prerequisite(s):** *SMAD 201, SMAD 202, SMAD 203, and SMAD 204; or permission of the instructor. Corequisite(s): SMAD 202, SMAD 203, SMAD 204.*

SMAD 301L. The Media Arts: Culture By Design**Credits 3.00 PeopleSoft Course ID 012278 Grading Basis GRD**

Study of how mediated communication molds perception and influences cultural change. Emphasis on how language and imagery, sound and music are combined in current media to create meaning. Consideration of emerging media and their implications for cultural design. Focus on British media and culture.

SMAD 302. Video Production**Credits 3.00 PeopleSoft Course ID 010575 Grading Basis GRD**

Principles and practices of video production and editing. Focus on production planning, visual composition, lighting, recording sound and sequencing of shots. Emphasis on single camera videography and editing for broadcast, non broadcast, and multimedia applications. **Prerequisite(s):** *SMAD 201 and SMAD 202; SMAD 203 or permission of the instructor. Corequisite(s): SMAD 203 or permission of the instructor.*

SMAD 303. Post Production**Credits 3.00 PeopleSoft Course ID 010527 Grading Basis GRD**

Principles and practices of video editing. Focus on the techniques, aesthetics, and strategies of editing video. Emphasis on technical standards of ingest, storage, non-linear editing, multi-layer compositing, and transcoding required for effective program output and multi-format distribution. **Prerequisite(s):** *SMAD 302 or Permission of the Instructor*

SMAD 304. Audio Production**Credits 3.00 PeopleSoft Course ID 006260 Grading Basis GRD**

Study of digital sound production, and digital sound-for-picture production. Emphasis on advanced theories and applications. **Prerequisite(s):** *SMAD 302 or permission of instructor. Corequisite(s): SMAD 303 or permission of instructor.*

SMAD 305. Special Topics in Media Production**Credits 3.00 PeopleSoft Course ID 009399 Grading Basis GRD**

The study of current topics and issues in media arts and design. Emphasis on contemporary themes of immediate concern. **Prerequisite(s):** *Admission to the SMAD major or permission of the instructor*

SMAD 306. Studio Production**Credits 3.00 PeopleSoft Course ID 012158 Grading Basis GRD**

The study of principles and practices of multi-camera studio production. Focus on visual composition, audio, lighting and communication in a studio environment. Emphasis on technical and aesthetic demands of multi-camera

studio production. **Prerequisite(s):** *SMAD 302 or SMAD 309 or permission of the instructor*

SMAD 307. Interactive Design Web I**Credits 3.00 PeopleSoft Course ID 010576 Grading Basis GRD**

Study of the principles of creating effective communication for the World Wide Web. Emphasis on the techniques used to design and integrate diverse media elements. Focus on the creation and manipulation of text, graphics, audio and video for the web. Consideration of interface design and web delivery issues.

Prerequisite(s): *SMAD 201, SMAD 202 and SMAD 203 or permission of the instructor. Corequisite(s): SMAD 202.*

SMAD 308. Interactive Design II**Credits 3.00 PeopleSoft Course ID 010528 Grading Basis GRD**

This course will study the principles and practices for creating effective interactive media. An emphasis is placed on user-centered design of the interactive experience. This course includes animation and scripting for online and fixed media. **Prerequisite(s):** *SMAD 307 or permission of the instructor.*

Corequisite(s): *SMAD 307.*

SMAD 309. Video Journalism**Credits 3.00 PeopleSoft Course ID 012646 Grading Basis GRD**

This course covers principles and practices in electronic journalism including information gathering, news writing, camera operations and editing techniques. Emphasis will be placed on the use of sound and video to produce hard news, feature news and long-form perspective-based stories for broadcast and online. Students will examine the internet's impact and the differences between traditional and online media outlets in constructing stories with video and sound. **Prerequisite(s):** *SMAD 201, SMAD 202, SMAD 203, SMAD 204, and SMAD 210; or permission of the instructor. Corequisite(s): SMAD 203, SMAD 204, and SMAD 210.*

SMAD 310. Advanced Reporting and Writing**Credits 3.00 PeopleSoft Course ID 003690 Grading Basis GRD**

Students will study and practice in-depth or specialized reporting roles and techniques, story genres, advanced writing methods and pursuing publication. The course will include reading exemplary writers. Group and instructor critiques will be used. **Prerequisite(s):** *SMAD 204 and SMAD 210; or permission of the instructor.*

SMAD 311. Feature Writing**Credits 3.00 PeopleSoft Course ID 008367 Grading Basis GRD**

The study and practice of conceiving, reporting and writing human interest stories. Use of advanced storytelling methods and pursuing publication. Reading exemplary writers. Group and instructor critiques. **Prerequisite(s):** *SMAD 210; For nonmajors: admission to the cross disciplinary minor in creative writing and SMAD 210; or permission of instructor.*

SMAD 315. Digital Social Media Advertising**Credits 3.00 PeopleSoft Course ID 014343 Grading Basis GRD**

This course introduces students to social media advertising by teaching students to use social media strategically to create value for a brand or organization. Students will create effective consumer-targeted content across the ever-changing digital social media landscape with emphasis on strategic collaboration, execution and measurement of social media efforts. Students will learn how to brand themselves using social media. By the end of this course, students will have a comprehensive selection of social media advertising portfolio pieces, a professional social media presence and the necessary skills to become successful social media brand managers. **Prerequisite(s):** *Creative Advertising, Digital Video and Cinema, and Journalism concentrators: SMAD 201 and SMAD 202. Interactive Design concentrators: SMAD 201 and SMAD*

203. **Corequisite(s):** *Creative Advertising, Digital Video and Cinema, and Journalism concentrators: SMAD 202. Interactive Design concentrators: SMAD 203.*

SMAD 317. User Interaction Design

Credits 3.00 PeopleSoft Course ID 013834

Study of web and mobile interaction design principles including goal driven design, usability, interactive design strategy, wireframing, and web and mobile app prototype development. **Prerequisite(s):** *SMAD 201, SMAD 202 and SMAD 203. Corequisite(s): SMAD 202*

SMAD 327. User-Centered Research and Usability Evaluation

Credits 3.00 PeopleSoft Course ID 014344 Grading Basis GRD

This course provides an in-depth examination of theories, methods and tools used by professionals in user-centered research. Students will learn through the process of completing a research project, from selecting a research topic through reporting findings and practical implications. In addition, the course enables students to pursue more advanced studies in user experience in capstone courses by equipping them with critical analytical and hands-on skills in a user-centered research process. **Prerequisite(s):** *SMAD 201 and SMAD 203.*

SMAD 330. New Media Law

Credits 3.00 PeopleSoft Course ID 010215 Grading Basis GRD

An in-depth investigation of business and legal aspects of new media production, publication and distribution, Examination of legal issues affecting the new media industry including: intellectual property laws, torts contracts and licensing. Discussion of current policies and practices affecting new media development and review of pertinent legal reference materials. **Prerequisite(s):** *SMAD 201, SMAD 202 and SMAD 203, plus SMAD 301 or SMAD 301L, and junior or senior standing or permission of instructor.*

SMAD 332. Visual Communication Design

Credits 3.00 PeopleSoft Course ID 009393 Grading Basis GRD

An introduction to the theories and methods of design for visual communication. Students will learn various techniques needed to produce the design materials that go into print and electronic publications. **Prerequisite(s):** *SMAD 201 or permission of the instructor.*

SMAD 334. Media and Justice

Cross listed with: *JUST 334*

Credits 3.00 PeopleSoft Course ID 012908 Grading Basis GRD

This course will examine media constructions of justice. Students will be required to critically analyze the portrayal of justice issues in various media forms including television, internet, and film. Attention will be given to the accuracy of such portrayals and whether they have any broader social implications in regards to how we view complex justice issues. **Prerequisite(s):** *Admission to the SMAD major.*

SMAD 340. Advanced Screenplay Writing

Credits 3.00 PeopleSoft Course ID 009875 Grading Basis GRD

Advanced study of the principles of screenplay writing for feature films and television movies. Emphasis is placed on the structure of narrative film. **Prerequisite(s):** *SMAD 251 or SMAD 253; For non-majors: Admission to the cross disciplinary creative writing minor and SMAD 251 or SMAD 253; or permission of instructor.*

SMAD 342. Elements of Creative Advertising

Credits 3.00 PeopleSoft Course ID 013438 Grading Basis GRD

This course introduces fundamentals of advertising message design and content production for traditional and new media. It examines common questions associated with producing content (i.e., functions and basics of

design for print, broadcast and online venues). Students will focus on characteristics of effective messages across media and developing professional production skills to produce diverse creative pieces. The course emphasizes ethical and legal issues. **Prerequisite(s):** *SMAD 201, SMAD 202, SMAD 203, SMAD 204, SMAD 242, and SMAD 252; or permission of instructor.*

Corequisite(s): *SMAD 203.*

SMAD 357. Youth, Communication and Culture

Cross listed with: *SCOM 357*

Credits 3.00 PeopleSoft Course ID 013051 Grading Basis GRD

This course critically examines the complex and evolving interconnections between young people, communication and culture. Grounded in the understanding that there is no one singular lived experience of "youth," the course focuses on: how young people are represented in popular culture artifacts; how cultural beliefs about various young people are constructed by public discourse; how diverse young people navigate popular culture messages; how they are constructed as target markets; and how they use technology to claim space in the broader culture. Encourages students to examine their own experiences with and relationships to a range of communication artifacts. **Prerequisite(s):** *Admission to the SMAD major.*

SMAD 360L. British Media and Society

Cross listed with: *HUM 251L, SCOM 360L, WRTC 360L*

Credits 3.00 PeopleSoft Course ID 012295 Grading Basis GRD

Study the history, nature, and impact of mass media in the United Kingdom. Emphasis on the impact modern media has on society, and society has on media. Consideration of similarities and differences in mass media in the United States and Great Britain. Consideration of the relationship between mass media and the arts. Focus on 20th century mass media in London, one of the world's preeminent and most influential centers.

SMAD 370. Mass Communication Law

Credits 3.00 PeopleSoft Course ID 002826 Grading Basis GRD

Principles and case studies in communication law, constitutional guarantees, libel, privacy, contempt, copyright and governmental regulatory agencies. Emphasis on recent cases and their effects on mass communication.

Prerequisite(s): *SMAD 201, SMAD 202 and SMAD 203, and SMAD 301 or SMAD 301L, and junior or senior standing or permission of instructor.*

SMAD 371. Narrative Media Studies

Credits 3.00 PeopleSoft Course ID 005430 Grading Basis GRD

This course is the study of narrative theories that focus on the forms and effects of storytelling in cinema and television. Emphasis is placed on how such theories explain the cultural impact and personal utility of narrative contents in everyday life. Students will consider "the hero's journey" in a variety of film genres and TV formats. **Prerequisite(s):** *For SMAD majors: junior or senior standing: SMAD 201, SMAD 202, SMAD 203, and SMAD 204; and one of SMAD 301 or SMAD 301L. For non-SMAD majors: junior or senior film studies minors only; or permission of instructor.*

SMAD 372. Media History

Credits 3.00 PeopleSoft Course ID 001437 Grading Basis GRD

The study of the history of the media in relation to American politics and society. Emphasis on key periods in the development of journalism and the mass media, and the role of the journalist in society. **Prerequisite(s):** *Admission to the SMAD major and junior or senior standing; or permission of the instructor.*

SMAD 373. Media Analysis and Criticism

Credits 3.00 PeopleSoft Course ID 007360 Grading Basis GRD

This course is the study and practice of journalistic and scholarly criticism of the mass media. Emphasis is placed on interpretive writing about television, film and popular music. Students will consider contemporary analytical methods for researching mass-mediated culture. **Prerequisite(s):** For SMAD majors: Junior or seniors standing and SMAD 201, SMAD 202, SMAD 203, and SMAD 204; and either SMAD 301 or SMAD 301L or ENG 380/SMAD 380; For non-SMAD majors: junior or senior creative writing minors only; or permission of instructor.

SMAD 380. Introduction to Film

Cross listed with: ENG 380

Credits 3.00 PeopleSoft Course ID 013448 Grading Basis GRD

An introduction to the study of film as an aesthetic practice, including formal and industrial aspects of film analysis, theoretical approaches to film, and writing and research methodologies of film and media studies. **Prerequisite(s):** Admission to the SMAD major or permission of the instructor

SMAD 390. Directed Projects

Credits 2.00 PeopleSoft Course ID 010195 Grading Basis GRD

Supervised projects related to the study of any of the communication media. Credit given for original individual or group programs beyond the school's usual cocurricular activities. A suitable completed project or report is required before credit can be awarded. **Prerequisite(s):** Admission to the SMAD major or permission of the instructor

SMAD 395. Advanced Practicum in Media Arts and Design

Credits 1.00 PeopleSoft Course ID 002706 Grading Basis GRD

Juniors and seniors participating in cocurricular media activities may receive one hour of credit for field work at The Breeze, Curio, WMRA-FM, the Madison Video Productions or other university-related media outlets. Students are limited to one practicum per semester. Application procedures will be available from the school prior to registration. **Prerequisite(s):** Permission of the instructor.

SMAD 398. Critical Studies in Media Arts and Design

Credits 3.00 PeopleSoft Course ID 012602 Grading Basis GRD

This course covers special issues of contemporary media and their contents. Emphasis is placed on the analysis of emerging issues in content production, reception and media effects. Focus is on the critical methods used to examine such issues. Consideration will be given to how particular methods may be applied in international as well as American media contexts. **Prerequisite(s):** Junior or senior standing and SMAD 201, SMAD 202, SMAD 203, SMAD 204, and either SMAD 301 or SMAD 301L; or permission of instructor.

SMAD 400. Senior Assessment in Media Arts and Design

Credits 0.00 PeopleSoft Course ID 011437 Grading Basis CNC

Students participate in testing, interviews, project reviews and other assessment activities as approved by the School of Media Arts and Design. Grades will be assigned on a credit/no-credit basis. **Prerequisite(s):** Senior standing and one of the following SMAD 330 or SMAD 370 or SMAD 450; or permission of the school director. **Corequisite(s):** SMAD 330 or SMAD 370 or SMAD 450.

SMAD 402. Motion Graphic Design and Production

Credits 3.00 PeopleSoft Course ID 010530 Grading Basis GRD

Study of the principles of motion design. Focuses on integrating media (video, greenscreen, photos, vector art, type) within compositing software to tell a story, convey a complex concept or artistically present an idea. Emphasis on graphic design and motion theory, typography for video, logo animation, and show package design. **Prerequisite(s):** SMAD 303 or Permission of Instructor

SMAD 403. Documentary Production

Credits 3.00 PeopleSoft Course ID 013629 Grading Basis GRD

This course explores the key components of documentary filmmaking and production. The course will introduce students to a professional level of documentary filmmaking, and will focus on enhancing nonfiction storytelling skills. The course will explore funding, festival and outreach strategies.

Prerequisite(s): SMAD 302 or SMAD 309.

SMAD 404. Advanced Interactive Design

Credits 3.00 PeopleSoft Course ID 010531 Grading Basis GRD

Study of advanced techniques in interactive media for online and fixed media delivery. Emphasis on emerging technologies and professional development strategies. Includes the creation of an interactive portfolio. **Prerequisite(s):** SMAD 308 and SMAD 317 or permission of instructor.

SMAD 405. Producing and Directing

Credits 3.00 PeopleSoft Course ID 010532 Grading Basis GRD

Study of the principles and practices of producing and directing programs for video and cinema. Emphasis on the producer's and director's contribution to creative development and production. Focus on the director's responsibilities, including directing talent, visualization, production, and project management. Additional focus on the producer's responsibilities, including creative development, production management, financial management, promotion, and distribution. **Prerequisite(s):** SMAD 302 and Senior Standing or permission of instructor

SMAD 407. Business and Management of Digital Media

Credits 3.00 PeopleSoft Course ID 010534 Grading Basis GRD

Study of the principles and practices of managing digital media production. Emphasis on financial and personnel management, client relationships, and the structures and practices of digital media industries. Consideration of new trends in production and distribution. Attention to career preparation and development. **Prerequisite(s):** SMAD fully admitted majors, senior standing, SMAD 302 or SMAD 307, or permission of the instructor

SMAD 408. Converged Media Lab

Credits 3.00 PeopleSoft Course ID 012614 Grading Basis GRD

This course is an advanced study in converged media production. This senior production studio class will focus on creative solutions for complex communication problems in print, video and web media. The client-based projects will require creative brainstorming, teamwork, project management, and analysis and criticism in addition to production and distribution. An emphasis is also placed on portfolio development. **Prerequisite(s):** Senior standing; SMAD 307, SMAD 317 and either SMAD 305, SMAD 315, SMAD 327 or SMAD 332; or permission of instructor.

SMAD 409. Electronic News Producing and Editing

Credits 3.00 PeopleSoft Course ID 010533 Grading Basis GRD

Study of the processes and responsibilities of producing news for electronic distribution. Students will research, write and produce stories for distribution over-the-air, on cable and over the Internet. Emphasis on legal and ethical issues in news coverage. **Prerequisite(s):** Fully admitted majors who have taken SMAD 309 or permission of the instructor.

SMAD 410. The Creative Producer

Credits 3.00 PeopleSoft Course ID 013439 Grading Basis GRD

Study of the principles and practices of producing for television. Emphasis on programming (entertainment news to late-night talk, sketch comedy, reality TV, drama, and sitcom), and the producing process (moving a project from idea to completion). Focus on budget management, and all phases of production management. Consideration of industry practices to help prepare students to

enter the entertainment industry. **Prerequisite(s):** *Acceptance into the JMU in LA program.*

SMAD 417. Business and Management of Interactive Design

Credits 3.00 PeopleSoft Course ID 014442 Grading Basis GRD

This course provides a study of the principles and practices of developing and managing interactive media projects for businesses and non-profits. Emphasis will be placed on user needs, organizational objectives, research, analytics, project proposals, project management, budgeting, content strategy and testing. Principles of effective leadership of human resources are also covered.

Prerequisite(s): *SMAD fully admitted majors, senior standing, SMAD 302 or SMAD 307, or permission of the instructor*

SMAD 421. Feature Magazine Production

Credits 3.00 PeopleSoft Course ID 004065 Grading Basis GRD

A practical course in which students produce a feature magazine published regularly by the journalism area. Each student is assigned a specific staff position. Students learn to use the latest computer pagination technology in the design and production of the magazine. **Prerequisite(s):** *SMAD 309 and either SMAD 310 or SMAD 311, or permission of the instructor.*

SMAD 422. Multimedia Journalism

Credits 3.00 PeopleSoft Course ID 000096 Grading Basis GRD

Course provides an advanced study and practice of multimedia journalism. Focus on storytelling with platforms including text, video, audio, photo and social media aggregation. This is a hands-on course producing multimedia packages involving idea generation, content production, website design and management. **Prerequisite(s):** *Journalism concentrators: SMAD 309 and SMAD 310; creative advertising concentrators: SMAD 225 and SMAD 342; or permission of the instructor.*

SMAD 442. Functions of Corporate Communication

Credits 3.00 PeopleSoft Course ID 013440 Grading Basis GRD

Examines how corporate communication functions (internal communication; investor, government, and media relations; corporate responsibilities; and crisis communication) are integrated in organizational objectives. Emphasizes strategic planning, message design and production, implementation/evaluation of new media technologies, research and current trends. Reviews responsibilities, duties, and legal/ethical standards in corporate communication issues. **Prerequisite(s):** *SMAD 342.*

SMAD 443. Creative Advertising Campaigns

Credits 3.00 PeopleSoft Course ID 013441 Grading Basis GRD

Study how to develop a creative advertising campaign across a range of traditional and new media. Examine the creative process including conceptualizing, brainstorming, idea generation, copywriting, and design layout. Emphasis on using creativity as a foundation to develop and sell the big idea. Focus on the stages of creative inspiration, concepts of the creative process and roles/functions of creative professionals in advertising, culminating in a creative advertising campaign. **Prerequisite(s):** *SMAD 203 and SMAD 342, or permission of instructor.*

SMAD 450. Law of Media Arts and Design

Credits 3.00 PeopleSoft Course ID 014605 Grading Basis GRD

This course provides an in-depth investigation of principles and case studies in constitutional guarantees and laws concerning both traditional mass and new media. Emphasis placed on the First Amendment, the current U.S. legal structure, intellectual property, privacy, libel and the intersection of technology and the law. **Prerequisite(s):** *For SMAD majors: junior or senior standing and SMAD 201, SMAD 202, SMAD 203, and either SMAD 301 or SMAD 301L; For non-SMAD majors: legal studies minors only; or permission of the instructor.*

SMAD 460. Film and Society

Credits 3.00 PeopleSoft Course ID 002885 Grading Basis GRD

Students will examine the cultural impact of the film industry as an institution of mass communication. Emphasis is placed on the interrelationship among social, economic and technological factors influencing the creation and consumption of motion pictures. Consideration given to particular films as indicators of cultural change. **Prerequisite(s):** *For SMAD majors: junior or senior standing and SMAD 201, SMAD 202, SMAD 203, SMAD 204, and either SMAD 301 or SMAD 301L or ENG 380/SMAD 380; For non-SMAD majors: junior or senior film studies minors only; or permission of instructor.*

SMAD 461. Film as Art

Credits 3.00 PeopleSoft Course ID 002643 Grading Basis GRD

This course is an advanced study of how movies tell stories in visual terms. Emphasis is placed on the historical evolution and design of the moving image. Consideration will be given to the latest imaging technologies affecting film narrative. **Prerequisite(s):** *For SMAD majors: junior or senior standing and SMAD 201, SMAD 202, SMAD 203, and SMAD 204; and either SMAD 301 or SMAD 301L or ENG 380/SMAD 380; for non-SMAD majors: junior or senior film studies minors; or permission of instructor.*

SMAD 462. Documentary in Film and Television

Credits 3.00 PeopleSoft Course ID 003684 Grading Basis GRD

This course is the study of content, style, technique and effect of representative samples of the documentary form. Consideration is given to informational and persuasive elements. **Prerequisite(s):** *For SMAD majors: junior or senior standing and SMAD 201, SMAD 202, SMAD 203, SMAD 204, and either SMAD 301 or SMAD 301L or ENG 380/SMAD 380. For non-SMAD majors: junior or senior film studies minors only; or permission of instructor.*

SMAD 463. Film Adaptations

Cross listed with: ENG 463L

Credits 3.00 PeopleSoft Course ID 010321 Grading Basis GRD

This course is the study of the process of adapting literature into feature films. Consideration is given to the original literary work, as well as to the changes undergone in its adaptation to film. **Prerequisite(s):** *For SMAD majors: junior or senior standing and SMAD 201, SMAD 202, SMAD 203, and SMAD 204; and either SMAD 301 or SMAD 301L or ENG 380/SMAD 380. For non-SMAD majors: junior or senior creative writing or film studies minors only; or permission of instructor.*

SMAD 463L. Film Adaptations

Credits 3.00 PeopleSoft Course ID 012279 Grading Basis GRD

The study of the process of adapting British Literature into feature films. Consideration is given to the original literary work, as well as to the changes undergone in its adaptation to film. **Prerequisite(s):** *Studies Abroad-London*

SMAD 464. Contemporary American Film

Credits 3.00 PeopleSoft Course ID 013442 Grading Basis GRD

This course is the study and analysis of modern American films of the past twenty years. Focus is placed on storytelling technique, cinematic elements and thematic content. Films will be examined against the backdrop of their specific historical, political and sociocultural context. **Prerequisite(s):** *For SMAD majors: junior or senior standing and SMAD 201, SMAD 202, SMAD 203, and SMAD 204; and either SMAD 301 or SMAD 301L or ENG 380/SMAD 380. For non-SMAD majors: junior or senior film studies minors only; or permission of instructor.*

SMAD 465. The Entertainment Industry

Credits 3.00 PeopleSoft Course ID 013849 Grading Basis GRD

Los Angeles is the entertainment capital of the world, including motion pictures, television, radio, advertising, music, gaming, publishing, theatre, dance, broadcasting and more. This course addresses the business and the critical aspects of the industry from the perspective of current entertainment professionals: producers, directors, actors, screenwriters, musicians, entertainment lawyers, TV writers, production managers, animators, cinematographers, marketers, talent agents, dancers, comedians and more. It emphasizes the critical analysis of careers in the entertainment industry and critical aspects of the business, from the idea through the exhibition. On a practical level, students will discover the extraordinary variety of careers within the entertainment industry and the importance of networking. Method of instruction: lecture, discussion and guest speakers **Prerequisite(s):** Admission to the JMU in LA program, junior or senior standing and SMAD 201, SMAD 202, SMAD 203, and SMAD 204; and either SMAD 301 or SMAD 301L; or permission of instructor.

SMAD 470. New Media and Society

Credits 3.00 PeopleSoft Course ID 012159 Grading Basis GRD

This course is the study of the key issues arising from the role of information and information technology in organizations and society. Emphasis is on the spheres of social life in which new media technologies play a role: politics, community, economics, culture, personal and global contexts. Focus is on a wide range of perspectives and on both theoretical and empirical research to examine new media's role in social capital and community. **Prerequisite(s):** For SMAD majors: Junior or senior standing and SMAD 201, SMAD 202, SMAD 203, and SMAD 204; and either SMAD 301 or SMAD 301L. For non-SMAD majors: junior or senior WRTC majors only; or permission of instructor.

SMAD 471. Media Ethics

Credits 3.00 PeopleSoft Course ID 000056 Grading Basis GRD

This course is the study and discussion of ethical principles and professional codes as applied to mass media production, covering journalism, advertising, public relations and entertainment, in all media forms. Emphasis is on case studies. **Prerequisite(s):** Junior or senior standing and SMAD 201, SMAD 202, SMAD 203, and SMAD 204; and either SMAD 301 or SMAD 301L; or permission of instructor.

SMAD 472. Media and Politics

Cross listed with: POSC 472, POSC 472L, POSC 472W, SCOM 472, SCOM 472L, SMAD 472L

Credits 3.00 PeopleSoft Course ID 008709 Grading Basis GRD

This course is a study of the media's role in the political system, concentrating on the dynamic and interdependent relationships among journalists, politicians, the public and public policy. The course explores media and politics theories; how media practices and technologies shape political decision making; how political forces influence media institutions; and how public opinion and media narratives are shaped.

SMAD 472L. Media and Politics

Cross listed with: POSC 472, POSC 472L, POSC 472W, SCOM 472, SCOM 472L, SMAD 472

Credits 3.00 PeopleSoft Course ID 008709 Grading Basis GRD

This course is a study of the media's role in the political system, concentrating on the dynamic and interdependent relationships among journalists, politicians, the public and public policy. The course explores media and politics theories; how media practices and technologies shape political decision making; how political forces influence media institutions; and how public opinion and media narratives are shaped. **Prerequisite(s):** Studies Abroad-London.

SMAD 490. Special Studies

Credits 3.00 PeopleSoft Course ID 006404 Grading Basis GRD

An independent study for students to pursue individual research under the guidance of a faculty adviser. **Prerequisite(s):** Senior SMAD majors in good standing and permission of the school director.

SMAD 495. Internship in Media Arts and Design

Credits 1.00 - 4.00 PeopleSoft Course ID 004714 Grading Basis GRD

An off-campus program prepared and monitored on an individual student basis. Internships are designed to provide practical experience in converged and interactive media, corporate communication, digital video and cinema, and journalism. **Prerequisite(s):** Permission of the school director and the media facility involved. Student must meet criteria and application procedures established in each concentration. May be repeated up to four credits.

SMAD 497. Advanced Projects in Media Arts and Design

Credits 3.00 PeopleSoft Course ID 012569 Grading Basis GRD

This advanced course will enable students to collaborate to create diverse media projects. Projects may be designed to focus on one or many concentrations, and are intended to provide a culminating media creation experience. **Prerequisite(s):** Junior or Senior SMAD Fully Admitted Majors or Permission of the Instructor.

SMAD 498. Senior Seminar in Media Arts and Design

Credits 3.00 PeopleSoft Course ID 009535 Grading Basis GRD

This course is the study and research in the history and philosophy of the function of mass communication in society. Consideration is given to topics relating to problems of communication systems, technological freedoms, and press freedom and responsibilities. **Prerequisite(s):** For SMAD majors: junior or senior standing and SMAD 201, SMAD 202, SMAD 203, and SMAD 204; and either SMAD 301 or SMAD 301L; or permission of instructor.

SMAD 499. Honors Senior Project

Credits 3.00 PeopleSoft Course ID 000130 Grading Basis GRD

This course enables honors students to develop, research and produce media-related creative and/or scholarly independent study honors senior projects.

Prerequisite(s): Permission of instructor.

SMAD 499A. Honors

Credits 1.00 PeopleSoft Course ID 005250 Grading Basis GRD

SMAD 499B. Honors

Credits 3.00 PeopleSoft Course ID 004180 Grading Basis GRD

Prerequisite(s): SMAD 201 and SMAD 202 and SMAD 203, plus SMAD 301 or SMAD 301L SMAD 301L, plus junior or senior standing, or permission of instructor.

SMAD 499C. Honors

Credits 2.00 PeopleSoft Course ID 008720 Grading Basis GRD

Middle and Secondary Education

MSSE 101. Orientation to the Profession

Credits 1.00 PeopleSoft Course ID 003302 Grading Basis GRD

This course provides information about preparation programs and careers for teachers of the middle and high school levels. Students participate in reflective activities for making personal and professional decisions about teaching and also engage in a service learning project. Students are responsible for transportation to field placements at local schools.

MSSE 201. Introduction to Social Studies Education Seminar

Credits 3.00 PeopleSoft Course ID 013836

The course will introduce students to social studies education through exploration of questions including: What is social studies education? Why teach social studies? What is the role of social studies content in the world of a teacher? What makes a social studies educator? Students will learn through

class discussions, field based classroom observations and guest speakers. Students should come to class prepared to challenge their preconceived notions surrounding social studies education.

MSSE 220. Measurement and Analysis for Education

Credits 3.00 PeopleSoft Course ID 014372 Grading Basis GRD

This is an introductory course in measurement and analysis in education, exploring statistical methods designed primarily for undergraduate preservice teachers in the liberal arts. The class presents basic measurement and statistical concepts with an emphasis on the logic of inferential statistics applicable to school-related professionals. While we assume you have no previous statistical background, we expect you to be proficient in arithmetic and basic algebra. The primary goal of this course is for you to build a solid foundation in measurement and analysis methods used in educational research in order to prepare you to read, understand and interpret testing and measurement data. A secondary goal is to become a better consumer (critical thinker) and advocate of and for educational research.

MSSE 370. General Instructional Methods for Grades 6-12

Credits 3.00 PeopleSoft Course ID 010643 Grading Basis GRD

This general teaching methods course provides a solid foundation for planning curriculum and instruction for middle and high school students. Topics include engaging adolescent learners, lesson design, instructional strategies and assessment models. **Prerequisite(s):** *SEED majors: Admission to teacher education; SEED minors: Admission to teacher education; MIED majors: Admission to teacher education, MIED 211 and LED 212.*

MSSE 371. Clinical Experience in Adolescent Education

Credits 1.00 PeopleSoft Course ID 006592 Grading Basis GRD

This course provides an opportunity for students to work with adolescent learners through a 15-hour service-learning component. In addition, students will explore the needs and challenges of adolescent learners, visit a local middle or high school, explore the art of teaching, and have multiple peer teaching opportunities. Throughout the semester, students will be prompted to reflect on their observations and teaching experiences in order to better understand the complexities inherent in teaching as well as their own personal beliefs, strengths and areas for growth. **Prerequisite(s):** *SEED minors: Admission to teacher education* **Corequisite(s):** *SEED minors: MSSE 370*

MSSE 397. Science Pedagogy

Cross listed with: *PHYS 302.*

Credits 2.00 PeopleSoft Course ID 014133 Grading Basis GRD

An introduction to the science of learning and how it informs teaching and learning in laboratory and field-based natural sciences. Special emphasis is given to conceptual change, metacognition and effective teaching strategies based on learning science, science discourse and argumentation, and safety.

MSSE 403. Behavior and Classroom Management in a Diverse Society

Credits 3.00 PeopleSoft Course ID 014102 Grading Basis GRD

This course is designed to provide students with an understanding of and skill to apply classroom and behavior management techniques and interventions, including techniques that promote emotional well-being and teach and maintain behavioral conduct and skills consistent with norms, standards and rules of the educational environment. Diverse approaches for classroom and behavior management based upon behavioral, cognitive, affective, social and ecological theory and practice will be learned. **Prerequisite(s):** *Admission to teacher education and MSSE 370.*

MSSE 411. English/Language Arts Teaching Methods, Grades 6-8

Credits 3.00 PeopleSoft Course ID 010644 Grading Basis GRD

This course covers specific instructional and assessment techniques and methods targeted for the middle school learner for middle and secondary teachers in their respective discipline areas. Competencies to be developed will include discipline-specific planning strategies, instructional models, assessment of student learning, etc. **Prerequisite(s):** *MSSE 370.*

Corequisite(s): *MSSE 415.*

MSSE 412. Social Studies Teaching Methods, Grades 6-8

Credits 3.00 PeopleSoft Course ID 010639 Grading Basis GRD

This course covers specific instructional and assessment techniques and methods targeted for the middle school learner for middle and secondary teachers in their respective discipline areas. Competencies to be developed will include discipline-specific planning strategies, instructional models, assessment of student learning, etc. **Prerequisite(s):** *MSSE 370.*

Corequisite(s): *MSSE 415.*

MSSE 413. Mathematics Teaching Methods, Grades 6-8

Credits 3.00 PeopleSoft Course ID 010637 Grading Basis GRD

This course covers specific instructional and assessment techniques and methods targeted for the middle school learner for middle and secondary teachers in their respective discipline areas. Competencies to be developed will include discipline-specific planning strategies, instructional models, assessment of student learning, etc. **Prerequisite(s):** *MSSE 370.*

Corequisite(s): *MSSE 415.*

MSSE 414. Natural Sciences Teaching Methods, Grades 6-8

Credits 3.00 PeopleSoft Course ID 010638 Grading Basis GRD

Specific instructional and assessment techniques and methods targeted for the middle school learner for middle and secondary teachers in their respective discipline areas. Competencies to be developed will include discipline-specific planning strategies, instructional models, assessment of student learning, etc. **Prerequisite(s):** *MSSE 370.* **Corequisite(s):** *MSSE 415.*

MSSE 415. Content Area Field Experience in Middle Schools

Credits 3.00 PeopleSoft Course ID 014621 Grading Basis GRD

This course allows students to put into practice many of the skills and theories learned in foundational education coursework. It is designed to introduce the diverse roles and responsibilities that a teacher has in the middle school classroom, while also giving students the opportunity to identify the perspectives of the students they will be teaching. Throughout this field experience, the host teacher is the primary instructor as students "learn on the job" while being supported by a university supervisor. **Prerequisite(s):** *For MIED and SEED majors: MSSE 370; For SEED minors: MSSE 370 and MSSE 371.* **Corequisite(s):** *MSSE 411, MSSE 412, MSSE 413, or MSSE 414.*

MSSE 420. Differentiation for Adolescents

Credits 3.00 PeopleSoft Course ID 014105 Grading Basis GRD

This course is designed to assist teacher candidates in meeting the diverse needs of adolescent learners. Participants will gain an increased understanding of how adolescents differ in their approaches to learning and how a responsive classroom can address these needs. Specific topics addressed include developing a positive classroom environment, using ongoing assessment to identify student needs, utilizing a variety of grouping strategies, designing instruction and assessment at an appropriate level of challenge, and engaging students in equally respectful tasks. **Prerequisite(s):** *Admission into teacher education and MSSE 370.*

MSSE 425. Assessment in Middle and Secondary Education

Credits 3.00 PeopleSoft Course ID 014103 Grading Basis GRD

This course is designed to prepare prospective teachers to create and evaluate both formal and informal assessment strategies. Candidates will construct

instruments ranging from formative learning checks to summative tests and projects/rubrics. Candidates will also learn to analyze assessment results in order to gauge student progress and adjust instruction appropriately. **Prerequisite(s):** *Admission to teacher education and MSSE 370.*

MSSE 430. Introduction to Mentoring Valley Scholars

Credits 3.00 PeopleSoft Course ID 014255 Grading Basis GRD

This course is designed to prepare and support JMU students as they begin a mentoring relationship with students in the area schools. JMU students will experience guest speakers and activities to assist them in their role helping area adolescents set and maintain the trajectory of their lives toward a college experience. By establishing positive relationships and modeling desirable characteristics of a college student, JMU students will provide support and guidance for the adolescent learners with which they engage.

MSSE 435. Mentoring for Valley Scholars Continued

Credits 1.00 - 3.00 PeopleSoft Course ID 014256 Grading Basis GRD

This course is designed to support JMU students as they continue to mentor adolescent learners in area schools. Through readings, activities and experiences, JMU students will continue to build the skills first introduced in MSSE 430. By fostering healthy relationships and modeling desirable characteristics of a college learner, JMU students will provide support and guidance for adolescent students transitioning from 8th to 9th grade.

Prerequisite(s): *MSSE 430.*

MSSE 441. English/Language Arts Content Methods, Grades 9-12

Credits 3.00 PeopleSoft Course ID 014135 Grading Basis GRD

Research findings regarding the multiple dimensions of teaching in English/language arts will be used to identify the most effective writing, creative arts and cognitive teaching methods for teaching students 9th-12th grade. The first half of the course will focus on the writing process (i.e. narrative and persuasive) and cognitive models of instruction, and the second half of the course will focus on literature, research and writing (multi-genre project) as well as supporting the three-day English/language arts unit planned in methods and taught in MSSE 446. **Prerequisite(s):** *MSSE 411. Corequisite(s):* *MSSE 446.*

MSSE 442. Social Studies Content Methods, Grades 9-12

Credits 3.00 PeopleSoft Course ID 014148 Grading Basis GRD

The aim of this course is to build, expand and draw from the social studies methods explored in MSSE 470H. This course gives students the opportunity to continue to consider, analyze and critically examine the details of their teaching career and the purpose of social studies education. Examples of some of the questions examined are: What is "good" teaching? What is the purpose of social studies education? What should students learn? What knowledge is most valuable? How will I meet the needs of diverse students? What are diverse methods of delivering instruction? How does one's belief about the purpose of education shape their pedagogy? **Prerequisite(s):** *MSSE 412. Corequisite(s):* *MSSE 447.*

MSSE 443. Mathematics Content Methods, Grades 9-12

Credits 3.00 PeopleSoft Course ID 014147 Grading Basis GRD

This course is designed to address mathematics-specific methods of instruction for prospective high school mathematics teachers (grades 9-12). Students will develop techniques for planning and assessing student-centered mathematics instruction. Through this course, students will become mathematics teachers who can (1) Support their practice and sustain their own learning over time; (2) reflect upon their practice, evaluate it and make changes when necessary; (3) collaborate with their colleagues to improve instruction;

and (4) stay informed of current innovations and trends in the field.

Prerequisite(s): *MSSE 413. Corequisite(s):* *MSSE 448.*

MSSE 444. Science Content Methods, Grades 9-12

Credits 2.00 PeopleSoft Course ID 014136 Grading Basis GRD

This course is designed to help the student evaluate and consume research findings about science teaching that identify the most effective instructional strategies for teaching science to students in grades 6-12. Emphasis will be on developing plans for employing the strategies and making appropriate instructional decisions based on instructional goals, the learner and available resources. **Prerequisite(s):** *MSSE 414. Corequisite(s):* *MSSE 449 and an approved science pedagogy course.*

MSSE 446. English Field Placement, Grades 9-12 (Lab)

Credits 1.00 PeopleSoft Course ID 014140 Grading Basis GRD

This practicum is designed to provide the necessary experience in order for students to be successful in their student teaching placement and support major components of their English course work. **Prerequisite(s):** *MSSE 415. Corequisite(s):* *MSSE 441.*

MSSE 447. Social Studies Field Placement, Grades 9-12 (Lab)

Credits 1.00 PeopleSoft Course ID 014142 Grading Basis GRD

This practicum is designed to provide the necessary experience in order for students to be successful in their student teaching placement and support major components of their social studies course work. **Prerequisite(s):** *MSSE 415. Corequisite(s):* *MSSE 442.*

MSSE 448. Mathematics Field Placement, Grades 9-12 (Lab)

Credits 1.00 PeopleSoft Course ID 014143 Grading Basis GRD

This practicum is designed to provide the necessary experience in order for students to be successful in their student teaching placement and support major components of their mathematics work. **Prerequisite(s):** *MSSE 415. Corequisite(s):* *MSSE 443.*

MSSE 449. Science Field Placement, Grades 9-12 (Lab)

Credits 1.00 PeopleSoft Course ID 014141 Grading Basis GRD

This practicum is designed to provide the necessary experience in order for students to be successful in their student teaching placement and support major components of their science course work. **Prerequisite(s):** *MSSE 415. Corequisite(s):* *MSSE 444.*

MSSE 450. Internship Seminar

Credits 2.00 PeopleSoft Course ID 014104 Grading Basis GRD

The internship seminar is designed to promote reflective decision-making by students engaged in their student teaching experience. The seminar setting offers students an opportunity to discuss their internship experiences in detail and reflect on the implications of that experience for their future practice. Teacher candidates will have the opportunity to demonstrate and articulate their growth as professionals as well as the effects of their teaching on student learning. **Corequisite(s):** *MSSE 475.*

MSSE 455. Special Topics in Pedagogical Content Knowledge

Credits 3.00 PeopleSoft Course ID 014637 Grading Basis GRD

This course will examine connections between theory and practice, and the relationship between knowing content and considering to whom that content is delivered. Pedagogy, the art and science of teaching, is enacted in varied ways and is specific to various disciplines. In this course, learners will collaborate in order to learn research-based practices that support student learning and the development of dispositional frameworks.

MSSE 475. Internship in Middle and Secondary Education

Credits 8.00 PeopleSoft Course ID 014106 Grading Basis CNC

During this internship, JMU teacher candidates will experience the full range of conditions and tasks expected of a teacher for students in grades 6-12 (or 6-8). Candidates will be expected to develop and demonstrate competencies in teaching with the supervision and support of experienced teachers. Furthermore, they will demonstrate mastery of the university's eleven conceptual framework competencies. **Corequisite(s): MSSE 450.**

MSSE 490. Special Studies in Education

Credits 1.00 – 3.00 PeopleSoft Course ID 005419 Grading Basis GRD

A supervised, individualized study of one or more issues and/or problems in middle and/or secondary education. *Prerequisite: The faculty adviser and the program coordinator must approve the plan for the study.*

MSSE 495. Topics in Science Pedagogical Content Knowledge

Cross listed with: BIO 489.

Credits 2.00 PeopleSoft Course ID 014134 Grading Basis GRD

Contributes to the further development of pre-service secondary science teachers' pedagogical content knowledge. Students will engage in education research to gain experience and develop instructional practices relevant to the Virginia Standards of Learning. To supplement their understanding of scientific concepts and the process of science, the focus will be on the nature of science encompassing literature from the history, philosophy, and sociology of science. **Prerequisite(s): CHEM 131; PHYS 140/PHYS 140L or PHYS 240/PHYS 240L; MSSE 414.**

Middle Education

MIED 211. Field Experience in Middle Education

Credits 1.00 PeopleSoft Course ID 010548 Grading Basis GRD

Literacy-based field placement grades 6-8 lab provides middle school preservice students with field-based opportunities to observe and work with children and teachers in middle school settings (grades 6-8). Students will explore the complex nature of language acquisition and reading including skills in phonemic and other phonological awareness, phonics, fluency, vocabulary development, and comprehension strategies for adolescent learners. Additional skills shall include proficiency in writing strategies, as well as the ability to foster appreciation of a variety of fiction and nonfiction text and independent reading for adolescent learners. Students will have first-hand opportunities to learn about middle level education in the context of real classrooms and provide instruction to young adolescents. **Corequisite(s): EDUC 310 and LED 212.**

Military Science

MSCI 100. Leadership Laboratory

Credits 2.00 PeopleSoft Course ID 006779 Grading Basis GRD

A laboratory in the development of leadership, stressing the practical application of leadership principles, techniques, styles and responsibilities. Participation as a member of a team or as a leader of the team given responsibility for accomplishment of given tasks. **Corequisite(s): MSCI 101 or MSCI 102.**

MSCI 101. Introduction to Leadership and the Army

Credits 2.00 PeopleSoft Course ID 008077 Grading Basis GRD

Introduction to various leadership styles and their effect on organizations; an introduction to the organization of the U.S. Army, its roles and missions, customs and traditions; effective writing and oral presentation techniques; orienteering and the use of lensatic compass; principles of physical conditioning. **Corequisite(s): MSCI 100.**

MSCI 102. Leadership Development Fundamentals

Credits 2.00 PeopleSoft Course ID 000531 Grading Basis GRD

Introduction to the basic principles of leadership; developing a personal leadership style; effective writing and speaking skills; introduction to leadership in small tactical units; fundamentals of first aid, land navigation and marksmanship; principles of personal conditioning. **Corequisite(s): MSCI 100.**

MSCI 150. American Military History

Credits 3.00 PeopleSoft Course ID 009979 Grading Basis GRD

An extensive look into the major engagements of the United States military from the Colonial period through the present. Particular attention will be paid to developing an understanding of the factors that have helped shape the unique way America wages war. This course considers the role and use of armed forces in relation to the social, cultural, political, economic, and technological development of the United States. It will not only address such themes as wartime strategy, operational tactics, and combat technology, but also the impact of warfare on society and on the remembrances of ordinary men and women in uniform. Significant attention will be given to the evolution of civil-military relations, the advent of professionalism in the military, the non-military uses of the military, and the military's role as a tool for global power.

MSCI 200. Intermediate Leadership Laboratory

Credits 2.00 PeopleSoft Course ID 012070 Grading Basis GRD

An intermediate leadership laboratory in the sequential process of leadership development, this course stresses the practical application of leadership principles and responsibilities and the exploratory development of personal leadership techniques and styles. The intermediate leadership laboratory focuses on leadership planning and execution and performance and evaluation as both a team member and a leader of a 10 to 30 person team. Cadets are given responsibility for accomplishing collective tasks and for the evaluation, counseling, leading and mentoring of 10 to 12 subordinates and team members. **Prerequisite(s): Contracting into the ROTC Basic Course (MSCI 101, MSCI 102 and MSCI 100). Department head approval required. To enroll in this lab section, students must obtain a sports physical or similar medical clearance. Contact the Military Science office for additional information.**

MSCI 201. Leadership Styles – Theory and Application

Credits 2.00 PeopleSoft Course ID 007720 Grading Basis GRD

A study of individual leadership styles and techniques, using historical case studies, to introduce the branches and specialties of the Army. The focus of this course is communication and goal setting in small organizations, effective writing and public speaking, and performance and evaluation as the leader of a five-member team required to accomplish tasks in a practical setting. Students also serve a member of a 10-person team responsible for accomplishing practical military and team-building tasks in a field setting. **Corequisite(s): MSCI 100, MSCI 200 for contracted Cadets in JMU ROTC.**

MSCI 202. Developing Leader Skills

Credits 2.00 PeopleSoft Course ID 001541 Grading Basis GRD

This course focuses on analyzing missions to determine specified and implied tasks; organizing and conducting a briefing, preparing a concise written directive (operations order), and detailing how a team will accomplish its tasks. Performance and evaluation of Cadets as the leader of a five person team during a 44-hour, off-campus leadership practicum and evaluation of physical fitness preparedness for attendance at Cadet Profession Development Training are also components of this course. **Corequisite(s): MSCI 100, MSCI 200 for contracted Cadets in JMU ROTC .**

MSCI 280. Internship in Military Leadership

Credits 6.00 PeopleSoft Course ID 011139 Grading Basis GRD

MSCI students may elect to participate in a 4-week leadership internship. The internship develops leadership skills through exposure to interactive personal

and group exercises. Students will learn how and when to lead others and the importance of teamwork in accomplishing a goal.

MSCI 300. Advanced Leadership Laboratory

Credits 3.00 PeopleSoft Course ID 004705 Grading Basis GRD

An advanced laboratory in the development of leadership, stressing the practical application of leadership principles, techniques, styles and responsibilities. For juniors, the advanced leadership laboratory focuses on preparation, execution, recovery and reflection. For seniors, the advanced leadership laboratory focuses on planning, resourcing, supervision and evaluation. Performance and evaluation as a leader of a 10 to 30 person team given responsibility for accomplishment of given tasks. Responsible for the evaluation, counseling and mentoring of 10 to 30 subordinates and team members. **Prerequisite(s):** *MSCI 100, MSCI 101, MSCI 102, MSCI 201, and MSCI 202. Department head approval required.*

MSCI 310. Leading Small Organizations

Credits 3.00 PeopleSoft Course ID 006232 Grading Basis GRD

Ethical dilemmas in leadership – when organizational goals conflict with member welfare; the role of policy and standard procedures in organizations; continued practice in effective writing and oral presentations; performance as a leader of a 10 person team in practical exercises; evaluation as an instructor of a period of instruction for 30 subordinates; evaluation as a leader of a 10 to 30 person team in a 44 hour, off-campus leadership practicum. **Prerequisite(s):** *MSCI 101, MSCI 102, MSCI 201 and MSCI 202 or placement credit as determined by the professor of military science. Corequisite(s): MSCI 300.*

MSCI 320. Developing Advanced Leader Skills

Credits 3.00 PeopleSoft Course ID 002942 Grading Basis GRD

Planning for the unexpected in organizations under stress; developing alternate courses of action which are viable with the given constraints; how to delegate tasks and supervise subordinate leaders; avoiding micro-management – the when and how of providing guidance and direction; time management – the "backward planning process"; evaluation of a 10 to 30 person team within tactical and nontactical settings; analysis of assigned tasks, preparation of a written directive to accomplish these tasks and oral presentation to others in a concise briefing. **Corequisite(s):** *MSCI 300.*

MSCI 355. American Women At War

Cross listed with: *WGSS 355*

Credits 3.00 PeopleSoft Course ID 013429 Grading Basis GRD

This course invites students to engage a series of issues about the role of women in the US military. This course will examine the contributions & experiences of women who served during the American Revolution, the U.S. Civil War, WW I & II, Korea, Vietnam and the Persian Gulf War(s). Also included in this course is an examination of how women in military service both past and present are an instrument for societal change in America specifically in promoting the cause of women's rights.

MSCI 360. Gender & Leadership

Credits 3.00 PeopleSoft Course ID 013761 Grading Basis GRD

Explore gender in leadership by focusing on social scientific research in sociology, psychology, political science, economics, management, organizational behavior, women's studies and leadership that illuminates the difficulties women experience in attaining and being seen as effective in top leadership positions.

MSCI 390. The Combat Experience

Credits 3.00 PeopleSoft Course ID 013430 Grading Basis GRD

The course will explore direct participation in military combat. It relies primarily on oral history gained from filmed and in-person interviews conducted by the

instructor with combat veterans. Participants range from WWII to the current Middle East conflict.

MSCI 400. Advanced Leadership Laboratory II

Credits 3.00 PeopleSoft Course ID 013431 Grading Basis GRD

An advanced laboratory in the development of leadership, stressing the practical application of leadership principles, techniques, styles and responsibilities. For seniors, the advanced leadership laboratory focuses on planning, resourcing, supervision and evaluation. Performance and evaluation as a leader of a 10 to 30 person team given responsibility for accomplishment of given tasks. Responsible for the evaluation, counseling and mentoring of 10 to 30 subordinates and team members.

MSCI 410. Seminar Command Management

Credits 3.00 PeopleSoft Course ID 007083 Grading Basis GRD

Studies in advanced leadership and management; how to assess organizational cohesion and develop strategies to improve it; examine and utilize components of the army's training cycle; methods of instruction, planning and conducting of classes to be taught at leadership lab; conduct of oral After-Action Reviews and preparation of written After-Action Reports; the counseling process for improving individual and group performance of subordinates. **Corequisite(s):** *MSCI 300.*

MSCI 420. Seminar on Officership Transition

Credits 3.00 PeopleSoft Course ID 010007 Grading Basis GRD

Introduction to Army management systems – personnel and logistics; the military's legal system and its application at the company level; the officerNCO relationship; The Officer Efficiency Report and its support form; establishment of project time lines with milestones, goals and In-Progress Reviews; book review on a required leadership book from chief of staff Army required reading list. **Corequisite(s):** *MSCI 300.*

MSCI 480. Internship in Advanced Military Leadership

Credits 6.00 PeopleSoft Course ID 011138 Grading Basis GRD

Upper-level MSCI students are required to participate in a 5-week leadership internship. The internship provides practical application of leadership principles, techniques, styles and responsibilities. Each student receives a performance evaluation as a leader of a 10-30 person group for every accomplished task.

MSCI 490. Special Studies in Military Science

Credits 1.00 – 3.00 PeopleSoft Course ID 000979 Grading Basis GRD

Designed to give students an opportunity to do upper-division independent study in selected areas under the supervision of a faculty member in the Military Science department. **Prerequisite(s):** *Department consent required.*

Music

MUS 100. Keyboard Skills

Credits 1.00 PeopleSoft Course ID 008728 Grading Basis GRD

A beginning level keyboard skills class for music majors. Includes basic techniques, sight reading, elementary repertoire and functional theory-related keyboard skills. **Prerequisite(s):** *Music Majors*

MUS 101. Keyboard Skills II

Credits 1.00 PeopleSoft Course ID 002073 Grading Basis GRD

An elementary, but not beginning, level keyboard skills class for music majors. Includes basic techniques, sight reading, elementary repertoire and functional theory-related keyboard skills. **Prerequisite(s):** *Music majors only. MUS 100 or placement by audition/interview.*

MUS 120. Diction for Singers

Credits 1.00 PeopleSoft Course ID 002058 Grading Basis GRD

The study of English and Italian pronunciation using the phonetic alphabet with emphasis on the performance of song literature in each language. Open to music majors and minors or by permission of instructor. **Prerequisite(s):** *Music Majors*

MUS 121. Diction for Singers II

Credits 1.00 **PeopleSoft Course ID** 008994 **Grading Basis** GRD

The study of French and German pronunciation using the phonetic alphabet with emphasis on the performance of song literature in each language.

Prerequisite(s): *Music Majors or Minors only.*

MUS 131. Fundamentals of Music

Credits 3.00 **PeopleSoft Course ID** 006804 **Grading Basis** GRD

Covers basic information in music theory, basic ear-training and sight-singing skills, and basic keyboard skills designed for the non-music major.

MUS 140. Introduction to Music Theory and Aural Skills

Credits 4.00 **PeopleSoft Course ID** 013744 **Grading Basis** GRD

Designed for non-music majors, music minors, musical theater majors, and students wishing to take songwriting, this course introduces students to the fundamental materials of music, both in written and aural form. Topics covered include: notation, rhythm and meter, key signatures, scales, intervals, triads, seventh chords, lead-sheet symbols, cadence, basic harmonic progressions, and form in popular music. This course may not be taken as a substitute for MUS 141 or MUS 143/144.

MUS 141. Foundations of Music Theory

Credits 3.00 **PeopleSoft Course ID** 002128 **Grading Basis** GRD

In this course students will master elements of musical literacy, including such concepts as rhythm and meter, clef reading, scales, key signatures, intervals, triads, and seventh chords. Placement in this course is determined by diagnostic exam and recommendation from the music theory and composition area in the School of Music.

MUS 143. Aural Skills I

Credits 1.00 **PeopleSoft Course ID** 003437 **Grading Basis** GRD

Study of ear training and sight singing involving diatonic materials. Includes melodic, harmonic and rhythmic dictation, and singing with solmization of melodic exercises.

MUS 144. Aural Skills II

Credits 1.00 **PeopleSoft Course ID** 007592 **Grading Basis** GRD

Continuation of MUS 143. Study of ear training and sight singing involving diatonic materials. Includes melodic, harmonic and rhythmic dictation, and singing with solmization of melodic exercises. **Prerequisite(s):** *MUS 143*

MUS 150. Introduction to Technological Applications in Music

Credits 1.00 **PeopleSoft Course ID** 010601 **Grading Basis** GRD

This course is designed to provide students with an overview of multiple applications of technology in music teaching. Topics to be covered include, but are not limited to: notation software, instructional software (including creative, practice, and performance), MIDI, productivity applications, and digital audio/recording.

MUS 195. Recital Attendance

Credits 0.00 **PeopleSoft Course ID** 000109 **Grading Basis** CNC

Required of all music majors for the first six semesters of their enrollment as a major. Successful completion of the course requires attendance at a specified number of approved recitals/concerts each semester. For complete course guidelines, please refer to the Undergraduate Music Student Handbook.

MUS 200. Music and Culture [C2VPA]

Credits 3.00 **PeopleSoft Course ID** 004139 **Grading Basis** GRD

This course focuses on the cultural and historical contexts of music, primarily of the European and American musical traditions, past and present. It is designed to increase the student's perceptual ability in listening to music and to encourage an interest in both familiar and unfamiliar music. Specific musical focus will vary by section. May be used for general education credit. May not be used for music major credit.

MUS 200H. Music in General Culture - Honors [C2VPA]

Credits 3.00 **PeopleSoft Course ID** 001575 **Grading Basis** GRD

This course focuses on the cultural and historical contexts of music, primarily of the European and American musical traditions, past and present. It is designed to increase the student's perceptual ability in listening to music and to encourage an interest in both familiar and unfamiliar music. Specific musical focus will vary by section. May be used for general education credit. May not be used for music major credit. **Prerequisite(s):** *Honors Students*

MUS 200M. Music in General Culture - Montreal [C2VPA]

Credits 3.00 **PeopleSoft Course ID** 011576 **Grading Basis** GRD

This course focuses on the cultural and historical contexts of music, primarily of the European and American musical traditions, past and present. It is designed to increase the student's perceptual ability in listening to music and to encourage an interest in both familiar and unfamiliar music. Specific musical focus will vary by section. May be used for general education credit. May not be used for music major credit.

MUS 202. Keyboard Skills III

Credits 1.00 **PeopleSoft Course ID** 005535 **Grading Basis** GRD

An intermediate level course in functional keyboard skills for music majors. Includes sight reading, transposition, harmonization, improvisation, playing by ear and accompanying techniques. Music majors only. **Prerequisite(s):** *MUS 101 or placement by audition/interview.*

MUS 203. Music in America [C2VPA]

Credits 3.00 **PeopleSoft Course ID** 009665 **Grading Basis** GRD

Knowledge and skills to increase the student's perceptual ability in music listening with a survey of American music; examining relationships between popular and classical music styles. May be used for general education credit. May not be used for major credit.

MUS 204. History of Rock

Credits 3.00 **PeopleSoft Course ID** 010742 **Grading Basis** GRD

History of rock is a music appreciation course designed to develop an understanding of both musical and cultural roots of rock music and the ability to hear a direct relationship between those roots and current popular music. A major component of the course is a survey of the history of 20th century American popular music.

MUS 206. Introduction to Global Music [C2VPA]

Credits 3.00 **PeopleSoft Course ID** 000624 **Grading Basis** GRD

A survey of various world music traditions, including those of Asia, the Pacific, Europe, Africa and the Americas. The course will focus on aesthetics, musical forms and styles, and the relationship between music and other arts. Emphasis will be placed on historical, religious, and cultural events and their influence on the creation and development of music. May be used for general education credit.

MUS 206H. Introduction to Global Music - Honors [C2VPA]

Credits 3.00 **PeopleSoft Course ID** 003790 **Grading Basis** GRD

A survey of various world music traditions, including those of Asia, the Pacific, Europe, Africa and the Americas. The course will focus on aesthetics, musical forms and styles, and the relationship between music and other arts. Emphasis will be placed on historical, religious, and cultural events and their influence on

the creation and development of music. May be used for general education credit. **Prerequisite(s):** *Honors Students*

MUS 207. History of Western Music

Credits 3.00 PeopleSoft Course ID 014580 Grading Basis GRD

Students in this course will study the historical and cultural contexts of European and American art music from antiquity to the present. **Corequisite(s):** *MUS 208.*

MUS 208. Repertoire Lab for History of Western Music

Credits 1.00 PeopleSoft Course ID 014581 Grading Basis GRD

Students in this course will encounter a wide variety of musical repertoire in conjunction with their study of historical and cultural contexts of European and American art music in MUS 207. **Corequisite(s):** *MUS 207.*

MUS 220. Assessment Tests – School of Music

Credits 0.00 PeopleSoft Course ID 012367 Grading Basis NON

Required, non-credit School of Music Assessment Test course which is to be taken before the Bachelor of Music degree is received, normally in the final spring semester of senior year. **Prerequisite(s):** *Music majors with Senior standing*

MUS 240. Jazz Improvisation Laboratory I

Credits 2.00 PeopleSoft Course ID 000965 Grading Basis GRD

Presents the fundamentals of improvisation in both jazz and popular musical styles. The class emphasis will be on creative work although some theory and chord nomenclature will be taught. Both vocal and instrumental musicians will be permitted to enroll, including both the general student and the music major **Prerequisite(s):** *Music major or jazz minor or permission of the instructor .*

MUS 241. Diatonic and Chromatic Harmony

Credits 3.00 PeopleSoft Course ID 006632 Grading Basis GRD

This course investigates harmony and phrase structure in common-practice works. Students will develop an awareness for common harmonic progressions and syntax and an understanding of such chromatic harmonic practices as tonicization and modulation. Students should complete the music theory placement test before enrolling in this course. Please contact the theory area coordinator to take the placement test.

MUS 243. Aural Skills III

Credits 1.00 PeopleSoft Course ID 001483 Grading Basis GRD

Continuation of MUS 144. Continued study of sight singing and ear training with diatonic and chromatic materials through exercises in melodic, harmonic and rhythmic dictation, and singing of melodic exercises with solmization.

Prerequisite(s): *MUS 144*

MUS 244. Aural Skills IV

Credits 1.00 PeopleSoft Course ID 003173 Grading Basis GRD

Continuation of MUS 243. Continued study of sight singing and ear training with diatonic and chromatic materials through melodic, harmonic and rhythmic dictation exercises and singing of melodic exercises with solmization. Introduction to modal and 20th-century materials. **Prerequisite(s):** *MUS 243*

MUS 250. Form and Analysis: Baroque and Classical

Credits 3.00 PeopleSoft Course ID 014229 Grading Basis GRD

This course has two main goals: To familiarize students with Baroque-era imitative forms and Classical-era forms, including binary, ternary, sonata and concerto, among others; and to continue students' study of chromatic harmony. **Prerequisite(s):** *A grade of "C-" or higher in MUS 241.*

MUS 251. Form and Analysis: Romantic

Credits 3.00 PeopleSoft Course ID 014230 Grading Basis GRD

This course has two main goals: To familiarize students with Romantic-era developments in forms such as binary, ternary, sonata and concerto, among

others; and to continue students' study of chromatic harmony. **Prerequisite(s):** *A grade of "C-" or higher in MUS 241.*

MUS 252. Analysis of Music 1900-1950

Credits 3.00 PeopleSoft Course ID 014232 Grading Basis GRD

An investigation of music from the first half of the twentieth century. Students will gain an understanding of compositional techniques and formal processes in atonal and centric music and an awareness of compositional trends during the time period. **Prerequisite(s):** *Grade of "C-" or higher in MUS 141 or MUS 241.*

MUS 253. Analysis of Music 1950-Present

Credits 3.00 PeopleSoft Course ID 014234 Grading Basis GRD

An investigation of music from the second half of the twentieth century and the beginning of the twenty-first century. Students will gain an understanding of compositional techniques and formal processes and an awareness of compositional trends during the time period. **Prerequisite(s):** *Grade of "C-" or higher in MUS 141 or MUS 241.*

MUS 254. Form and Analysis: Popular Music

Credits 3.00 PeopleSoft Course ID 014231 Grading Basis GRD

An investigation of popular music in the twentieth and twenty-first centuries. Students will develop an understanding of formal, harmonic, metric, rhythmic and timbral aspects of popular music in a variety of eras as well as an awareness of its historical trends. **Prerequisite(s):** *Grade of "C-" or higher in MUS 141 or MUS 241.*

MUS 255. Jazz Theory

Credits 3.00 PeopleSoft Course ID 013067 Grading Basis GRD

This course introduces students to the basic elements of jazz melodic, rhythmic and harmonic structure and style. Written analytical techniques and aural skills development will be emphasized. **Prerequisite(s):** *MUS 241 or permission of instructor.*

MUS 256. Contrapuntal Techniques

Credits 3.00 PeopleSoft Course ID 014233 Grading Basis GRD

Study of counterpoint through analysis and composition. Although the course emphasizes eighteenth-century counterpoint, other kinds of counterpoint (such as sixteenth- or twentieth-century) may also be covered. **Prerequisite(s):** *Grade of "C-" or higher in MUS 241.*

MUS 303. Keyboard Skills IV

Credits 1.00 PeopleSoft Course ID 005230 Grading Basis GRD

A moderately advanced course in functional keyboard skills for music majors. Includes sight reading, transposition, harmonization, improvisation, playing by ear and accompanying techniques. Designed to prepare music major students for required Keyboard Proficiency Examination. Music majors only.

Prerequisite(s): *MUS 202 or placement by audition/interview.*

MUS 303A. Keyboard Skills IV for Pianists

Credits 1.00 PeopleSoft Course ID 009084 Grading Basis GRD

A moderately advanced course in functional keyboard skills for piano majors. Includes sight reading, transposition, harmonization, improvisation, playing by ear and accompanying techniques. Designed to prepare music major students for required Keyboard Proficiency Examination. **Prerequisite(s):** *Music majors only. MUS 202 or placement by audition/interview.*

MUS 305. Jazz Keyboard Skills

Credits 1.00 PeopleSoft Course ID 013003 Grading Basis GRD

This course introduces and develops the keyboard skills necessary to construct piano accompaniments in the jazz idiom using a progression of chord symbols or a lead sheet. Successful completion of this course is required in order to

enroll in upper level courses in the Jazz Studies major. **Prerequisite(s):** *MUS 101 or instructor permission*

MUS 317. Basic Conducting

Credits 2.00 PeopleSoft Course ID 004934 Grading Basis GRD

Designed to acquaint the student with the fundamental elements of conducting technique, such as beat patterns, cueing, expression, transposition and score reading, with an emphasis on applying these techniques in practical conducting experiences involving vocal and instrumental forces. **Prerequisite(s):** *MUS 241 and MUS 144 or junior standing.*

MUS 318. Intermediate Choral Conducting

Credits 2.00 PeopleSoft Course ID 000513 Grading Basis GRD

Consists of the further application of basic conducting skills learned in MUS 317 to the choral situation with emphasis on baton techniques, score reading, and preparation and introduction to choral literature. **Prerequisite(s):** *MUS 317.*

MUS 319. Intermediate Instrumental Conducting

Credits 2.00 PeopleSoft Course ID 003794 Grading Basis GRD

A continuation of basic conducting to develop skills in baton technique with emphasis on advanced literature for public school use. Included are score sight-reading skills and literature selection. **Prerequisite(s):** *MUS 317.*

MUS 343. Basic Movement and Acting Skills for the Opera Stage

Credits 2.00 PeopleSoft Course ID 013519 Grading Basis GRD

A studio environment dedicated to the study of gesture, basic dance, movement, and acting skills for classical singers. Emphasis will be given to score interpretation, movement phrasing, and physical expression of musical ideas. Final assessment will be based on duet or small scene performance. May be repeated for credit with the approval of the instructor.

MUS 345. Small Ensemble Jazz Arranging

Credits 3.00 PeopleSoft Course ID 012997 Grading Basis GRD

This course introduces students to the techniques of arranging for two-horn, three-horn, and four-horn jazz ensembles. Students will study the classic repertoire of small jazz groups between 1930 and the present day, and create and record small ensemble arrangements in various styles. **Prerequisite(s):** *MUS 255, MUS 305 or permission of the instructor.*

MUS 346. Large Ensemble Jazz Arranging

Credits 3.00 PeopleSoft Course ID 012998 Grading Basis GRD

This course introduces students to the techniques of arranging for large jazz ensemble ("big band"). Students will study representative works of seminal big band composers active between 1930 and the present day, and create and record a full big band arrangement. **Prerequisite(s):** *MUS 255, MUS 305, MUS 345, or permission of the instructor.*

MUS 352. Music Composition

Credits 2.00 - 3.00 PeopleSoft Course ID 005241 Grading Basis GRD

Individual/seminar instruction in composition. Compositions are performed publicly. May be repeated. **Prerequisite(s):** *MUS 241 and permission of instructor.*

MUS 356. History of Jazz in America

Credits 3.00 PeopleSoft Course ID 006037 Grading Basis GRD

A study of American jazz with particular emphasis on its practices with reference to principal performers and composers of jazz-style periods.

MUS 356M. History of Jazz - Montreal

Credits 3.00 PeopleSoft Course ID 011577 Grading Basis GRD

MUS 357. Music Theatre History and Analysis

Cross listed with: *THEA 357*

Credits 3.00 PeopleSoft Course ID 003904 Grading Basis GRD

Survey of musical theatre genres, composers, lyricists, performers, directors and choreographers in America from 1750 to present. Includes practical study of the format of the libretto and musical score in relationship to the major musical theatre genres. Consideration of how music theatre developed from and reflected the cultural, social, and political landscape of its time.

Prerequisite(s): *Music majors with an emphasis in music theatre only or permission of the instructor.*

MUS 371. Private Piano Pedagogy

Credits 2.00 PeopleSoft Course ID 007930 Grading Basis GRD

This course will cover the different approaches to piano pedagogy, the pros and cons of precollege-level methodologies and materials, and how to teach students of various ages and abilities. Observed teaching is also a component of this course.

MUS 380. Musicological Perspectives

Credits 3.00 PeopleSoft Course ID 014582 Grading Basis GRD

Students in this course will employ critical musicological perspectives as they explore a series of issues and concepts (socio-cultural, technical, ethical, theoretical, ethnographic, philosophical, etc.) of vital importance to musicians. Students will approach these issues via a wide variety of musical case studies taken from diverse genres, regions, periods and styles as they build upon knowledge gained in previous courses. **Prerequisite(s):** *MUS 206 and MUS 207. Corequisite(s):* *MUS 381.*

MUS 381. Music Research Lab

Credits 1.00 PeopleSoft Course ID 014582 Grading Basis GRD

Students in this course will work to improve their music-specific research and writing skills. **Corequisite(s):** *MUS 380.*

MUS 395. Junior or Senior Half Recital

Credits 0.00 PeopleSoft Course ID 011272 Grading Basis CNC

Presentation of a half recital, representative in quality of passing performance level 6 or 7 as set by the pertinent performance area faculty. Memorization is required in those areas that traditionally expect it. Course to be graded on credit/no credit basis. **Prerequisite(s):** *Prerequisites: Junior standing and approval of the performance faculty of the performer's area.*

MUS 404. Advanced Keyboard Skills

Credits 1.00 PeopleSoft Course ID 006015 Grading Basis GRD

Designed for vocal music majors. The emphasis is on achieving fluency in reading vocal accompaniments, SATB open scores and incorporating solo voice parts with accompaniments in preparation for the Advanced Keyboard Skills Exam. This is a group class, which can be repeated. **Prerequisite(s):** *MUS 303.*

MUS 420. Piano Technology I

Credits 1.00 PeopleSoft Course ID 008568 Grading Basis GRD

This course is an introduction to the acoustical and mechanical design and history of the piano. Students will learn the theory of tuning and temperaments and will be introduced to the procedures and techniques used in regulating and voicing pianos.

MUS 421. Piano Technology II

Credits 1.00 PeopleSoft Course ID 014470 Grading Basis GRD

Students will practice tuning pianos under the supervision of the instructor. This will allow for practical application of the skills learned in MUS 420. Required for students in the piano performance concentration. Other students may take the course as space allows. **Prerequisite(s):** *MUS 420.*

MUS 429. Introduction to Intentional Music

Credits 1.00 PeopleSoft Course ID 013624 Grading Basis GRD

This course explores intentional uses of music to achieve outcomes with atypical populations. Students will observe intentional music activities in varied settings, study research-based applications of intentional music, and develop intentional music activities for case study populations. They will also reflect on their own musical identities, and those of potential clients, to develop skills in communication and planning.

MUS 430. Music and Human Services: Experiences and Practicum

Credits 2.00 PeopleSoft Course ID 013413 Grading Basis GRD

This course integrates psychological and cultural functions of music with activities and goals of human service organizations. Representatives of human services organizations are invited to explain their interventions with diverse populations. Students will be offered practicum experiences in these agencies. Through relating these experiences to the class, in seminar fashion, interdisciplinary practices will be illustrated.

MUS 435. Instrumentation

Credits 3.00 PeopleSoft Course ID 013632 Grading Basis GRD

In-depth practicum on idiomatic writing for orchestral instruments both individually and in an ensemble setting. Students are introduced to the characteristics and limitations of each instrument with written exercises, listening and score study examples from significant orchestral works, demonstrations by representative instrumentalists, and small-scale scoring projects. **Prerequisite(s):** MUS 241 and MUS 352 (at least one semester) or permission of the instructor.

MUS 440. Jazz Improvisation Laboratory I

Credits 2.00 PeopleSoft Course ID 009465 Grading Basis GRD

Presents intermediate to advanced improvisation skills in the jazz idiom alone. There is an emphasis on the theoretical analysis of chord progressions as well as on creative musical application. The course concludes by introducing some advanced musical improvisation concepts. May be repeated. **Prerequisite(s):** MUS 240 or permission of the instructor.

MUS 440M. Jazz Improvisation Lab II - Montreal

Credits 2.00 PeopleSoft Course ID 011749 Grading Basis GRD

Presents intermediate to advanced improvisation skills in the jazz idiom alone. There is an emphasis on the theoretical analysis of chord progressions as well as on creative musical application. The course concludes by introducing some advanced musical improvisation concepts. **Prerequisite(s):** MUS 240.

MUS 441. Vocal Arranging

Credits 2.00 PeopleSoft Course ID 010248 Grading Basis GRD

This course examines arranging for vocal ensembles. Included will be fundamental concepts of orchestration. **Prerequisite(s):** MUS 241 and MUS 244.

MUS 442. Instrumental Arranging

Credits 2.00 PeopleSoft Course ID 000750 Grading Basis GRD

This course covers arranging for various instrumental ensembles, including fundamental concepts for orchestration. **Prerequisite(s):** MUS 244.

MUS 445. Orchestration

Credits 3.00 PeopleSoft Course ID 011397 Grading Basis GRD

Survey of modern orchestration techniques building on the foundations established in MUS 435. Students will gain familiarity with current practice and nuances of scoring for large instrumental ensembles through examples from traditional and contemporary literature and small-scale scoring assignments. Students will focus on the preparation and production of a professional-quality score and orchestral parts leading to a reading session with the JMU Symphony Orchestra at the end of the term. **Prerequisite(s):** MUS 435 or permission of the instructor.

MUS 446. Jazz Composition

Credits 2.00 PeopleSoft Course ID 012999 Grading Basis GRD

An introduction to techniques of jazz composition. Students will study classic jazz compositions and create original compositions utilizing various harmonic techniques. **Prerequisite(s):** MUS 255, MUS 244, MUS 305

MUS 450. Topics in Music Analysis

Credits 3.00 PeopleSoft Course ID 008364 Grading Basis GRD

Analytical investigation of musical examples in a variety of styles. Topics vary. See department to request information about the topic for a given semester. Course may be repeated for different topics. **Prerequisite(s):** MUS 244 and grade of "C-" or higher in any four of the following: MUS 141, MUS 241, MUS 250, MUS 251, MUS 252, MUS 253, MUS 254 or MUS 256.

MUS 460. Piano Literature I

Credits 2.00 PeopleSoft Course ID 001258 Grading Basis GRD

A survey of baroque and classical literature for the piano encompassing solo and concerto repertoire. An examination of literature for the clavichord, harpsichord and pianoforte.

MUS 465. Opera History and Literature

Credits 3.00 PeopleSoft Course ID 008912 Grading Basis GRD

A survey study of the history of opera. Consideration will be given to the chronological development of all forms of music theatre with an emphasis on style characteristics through aural identification. **Prerequisite(s):** Any four of the following music theory courses: MUS 141, MUS 241, MUS 250, MUS 251, MUS 252, MUS 253, MUS 254 or MUS 256 or permission of the instructor. Students are strongly encouraged to take MUS 250 or MUS 251 prior to registering for this class.

MUS 467. Song Literature

Credits 3.00 PeopleSoft Course ID 006389 Grading Basis GRD

A survey of vocal art-song literature in Western culture. **Prerequisite(s):** Any four of the following music theory courses: MUS 141, MUS 241, MUS 250, MUS 251, MUS 252, MUS 253, MUS 254 or MUS 256 or permission of the instructor.

MUS 470. Piano Literature II

Credits 2.00 PeopleSoft Course ID 005159 Grading Basis GRD

A survey of romantic, impressionistic and 20th-century literature for the piano, including solo and concerto repertoire, with an emphasis on stylistic trends of the 20th century.

MUS 471. Piano Literature III

Credits 2.00 PeopleSoft Course ID 014469 Grading Basis GRD

A survey of piano literature from the middle of the 20th century to the present day. In addition to studying the most well-known works, the class will explore and evaluate piano music by composers who may be considered underrepresented and marginalized by reasons of ethnicity, gender, political or sexual identity.

MUS 472. Instrumental Pedagogy

Credits 1.00 PeopleSoft Course ID 007908 Grading Basis GRD

Presentations of instrumental methods, solo and ensemble literature related to the instrumental performer's own major area. Private instruction approaches and techniques are also considered with particular reference to the beginning player.

MUS 473. Jazz Ensemble Procedures and Techniques

Credits 2.00 PeopleSoft Course ID 010611 Grading Basis GRD

This course addresses all aspects of instrumental jazz instruction (big band and small group). Teaching philosophies, rehearsal techniques and resource materials will be examined; the syllabus includes opportunities to observe and

rehearse jazz groups. Enrollment is not limited to traditional jazz instrumentation. Required for the jazz studies concentration and recommended as an elective for music education students.

MUS 477. Vocal Pedagogy

Credits 2.00 PeopleSoft Course ID 005845 Grading Basis GRD

Designed to acquaint the prospective teacher with techniques of vocal pedagogy, both scientific and empirical. The course involves study, practice and observation.

MUS 480. Advanced Seminar in Musicological Topics

Credits 3.00 PeopleSoft Course ID 011939 Grading Basis GRD

An intensive study of a single topic in musicology or ethnomusicology. Topics change each semester, and may include studies of a specific musical issue (performance practice, etc.), a single composer's music, a single musical genre (the string quartet, etc.), or music at a specific time and/or place (music in fin de siècle Paris, music in modern South Africa, the second Viennese school, etc.). Fulfills the college of Visual Performing Arts writing-intensive requirement for the major. May be repeated for credit.

MUS 485. Advanced Jazz Topics Seminar

Credits 3.00 PeopleSoft Course ID 013000 Grading Basis GRD

An intensive study of a single topic in jazz studies. Topics change each semester, and may include studies of a specific musical issue (performance practice, etc.), a single composer's or performer's music (Duke Ellington, Miles Davis, etc.), a single musical genre (the development of big band style, etc.), or a sociological study (jazz in Europe, jazz and American culture, etc.). May be repeated for credit. **Prerequisite(s):** *MUS 356 or permission of the instructor.*

MUS 490. Special Studies in Music

Credits 1.00 - 3.00 PeopleSoft Course ID 008945 Grading Basis GRD

Designed to give superior music students an opportunity to complete independent study under faculty supervision. **Prerequisite(s):** *Permission of the instructor and school director.*

MUS 493. B.A. Capstone Project

Credits 1.00 - 3.00 PeopleSoft Course ID 014472 Grading Basis GRD

This course is intended for students pursuing the Bachelor of Arts in Music. Students enroll in this course at the end of their degree program, working closely with a faculty mentor and a committee selected by the student in consultation with their mentor to complete their project. Repeatable. Must be taken for a total of three credit hours. **Prerequisite(s):** *Instructor consent required.*

MUS 495. Senior Graduation Recital

Credits 1.00 PeopleSoft Course ID 009127 Grading Basis GRD

Presentation of a full recital, with the quality of performance to meet standards for admission to graduate school master's of music programs. Memorized recital presentations will be required in those areas which traditionally demand them. **Prerequisite(s):** *Senior Standing*

MUS 497. Senior Project in Theory

Credits 1.00 PeopleSoft Course ID 008058 Grading Basis GRD

Analytical paper or other topic approved by the theory-composition area. Enrollment is for students who want to do graduate work in music theory.

MUS 498. Selected Topics in Music

Credits 1.00 - 3.00 PeopleSoft Course ID 009105 Grading Basis GRD

Courses in music or music education which are of a topical nature. This may be repeated.

MUS 498P. Percussion Lit

Credits 2.00 PeopleSoft Course ID 002159 Grading Basis GRD

MUS 499. Honors

Credits 6.00 PeopleSoft Course ID 008941 Grading Basis GRD

This is a year long course.

MUS 499A. Honors

Credits 3.00 PeopleSoft Course ID 009264 Grading Basis GRD

Music Education

MUED 200. Small Ensemble for Instrumental Music Education

Credits 0.00 PeopleSoft Course ID 013517 Grading Basis CNC

This course will fulfill the NASM requirement for instrumental music education majors to gain experiences in small ensembles. Students enrolled in this course may complete the requirement through a variety of experiences approved by their academic advisor, including participation in String Ensembles, Camerata Strings, Collegium Musicum, Woodwind Ensembles, Guitar Ensemble, Percussion Ensembles, Jazz Chamber Ensembles, Collaborative Piano, Brass Chamber Ensembles.

MUED 201. Small Ensemble for Vocal Music Education

Credits 0.00 PeopleSoft Course ID 013518 Grading Basis CNC

This course will fulfill the NASM program requirement for vocal music education majors to gain experiences in small ensembles. Students enrolled in this course may complete the requirement through a variety of experiences approved by their academic advisor, including participation in Treble Chamber Choir, Men's and Women's Chamber Choirs, Bach Aria Group, Madison Singers, Collegium Musicum, or Opera Theatre.

MUED 206. Instrumental Music Methods for Vocal Music Education

Credits 1.00 PeopleSoft Course ID 001054 Grading Basis GRD

Provides vocal track music education majors with experiences, methods, and techniques for instrumental music instruction and a fundamental knowledge of and proficiency on woodwind, brass, percussion, and string instruments.

MUED 271. Music Education: A Professional Choice

Credits 1.00 PeopleSoft Course ID 006392 Grading Basis GRD

Students engage with ethical, philosophical and pragmatic issues surrounding their choice to pursue professional licensure in PK-12 music education. This course includes observation of learning and teaching in elementary, middle, and high school music classrooms, as well as an introduction to the application of National Core Music Standards, Virginia Standards of Music for Learning, JMU's Conceptual Framework and JMU's Eight Key Questions. Course assignments and projects contribute to continued development of a digital portfolio.

MUED 273. Music Education: Professional Practice

Credits 1.00 PeopleSoft Course ID 013068 Grading Basis GRD

Second course in the sophomore music education sequence. Builds on the foundation of philosophy, history and psychology of music teaching established in the first semester of the sequence (MUED 271) with an emphasis on the application of foundational knowledge to planning and leading instruction. Continued observation in PreK-12 and other settings with opportunities to teach. **Prerequisite(s):** *MUED 271.*

MUED 301. Woodwind Techniques

Credits 1.00 PeopleSoft Course ID 008807 Grading Basis GRD

Instruction in the basic skills of playing and teaching standard woodwind instruments in a heterogeneous class situation. Various methods for woodwind teaching will be studied, and materials used in public school teaching will be examined and performed. **Prerequisite(s):** *Sophomore standing.*

MUED 303. Brass Techniques

Credits 1.00 PeopleSoft Course ID 008958 Grading Basis GRD

Instruction in the basic skills of playing and teaching standard brass instruments in a heterogeneous class situation. Various methods for brass teaching will be studied, and materials used in public school teaching will be examined and performed. **Prerequisite(s):** *Sophomore standing.*

MUED 305. Percussion Techniques

Credits 1.00 PeopleSoft Course ID 009507 Grading Basis GRD

Instruction in the basic skills of playing and teaching standard percussion instruments in a heterogeneous class situation. Various methods of percussion teaching will be studied, and materials used in public school teaching will be examined and performed. **Prerequisite(s):** *Sophomore standing.*

MUED 307. String Techniques

Credits 1.00 PeopleSoft Course ID 009643 Grading Basis GRD

Instruction in the basic skills of playing and teaching string instruments. Instruction will be on violin, viola, cello and bass in a heterogeneous class situation. Various methods for string teaching will be studied, and materials used in public school teaching will be examined and performed. **Prerequisite(s):** *Sophomore standing.*

MUED 310. Vocal Techniques

Credits 1.00 PeopleSoft Course ID 004637 Grading Basis GRD

Class instruction designed to acquaint the instrumental (nonvoice) major with fundamentals of vocal and choral techniques including posture, breath support, basic vocal production, physiological functions of the vocal mechanism, singer's diction, vocal exercises, and individual as well as ensemble performances. **Prerequisite(s):** *Music Majors*

MUED 311. Ensemble Techniques

Credits 1.00 PeopleSoft Course ID 014541 Grading Basis GRD

This class focuses on honing students' secondary instrument playing skills learned in techniques courses. This course instructs students on further rehearsal skills and potential related practicum experiences in the context of a laboratory ensemble setting. **Prerequisite(s):** *MUED 271, MUED 273, MUED 301, MUED 303, MUED 305, MUED 307 and MUS 317.*

MUED 371. Beginning Methods and Materials for Instrumental Music

Credits 2.00 PeopleSoft Course ID 002657 Grading Basis GRD

Methods and materials for beginning through intermediate instrumental music students. Administrative concerns are included. **Prerequisite(s):** *MUED 273, full admission to teacher education and level 3 in major applied area.*

MUED 372. General Music Practices

Credits 2.00 PeopleSoft Course ID 004154 Grading Basis GRD

Focuses on broad preparation for teaching the general music courses now found at both middle and high school levels. **Prerequisite(s):** *MUED 273, full admission to teacher education and level 3 in major applied area.*

MUED 373. Advanced Methods and Materials for Instrumental Music

Credits 2.00 PeopleSoft Course ID 003766 Grading Basis GRD

Learning experiences related to the career needs of school instrumental music teachers are analyzed, discussed and practiced. Planning and teaching skills are presented for beginning, intermediate and advanced level students. **Prerequisite(s):** *MUS 317 and MUED 271 are the prerequisites.*

MUED 376. Choral Music Materials and Techniques

Credits 2.00 PeopleSoft Course ID 000009 Grading Basis GRD

This course is an in-depth summary of the pedagogy, principles, methodology and resources in choral music education, with special emphases on high school choral teaching and community outreach. This course is designed to aid students in synthesizing their cumulative music education learning into a defined and refined skill set in advance of student teaching and in preparation for a music teaching career. An embedded practicum experience at an area

retirement center is an integral component of this course. The level of this intergenerational choir parallels that of a 9th-grade choral ensemble; as such it provides an ideal, hands-on opportunity to teach choral music, leading to a culminating concert. **Prerequisite(s):** *MUS 317 and MUED 273, full admission to teacher education and Level 4 in major applied area.*

MUED 380. Music in the Elem School

Credits 2.00 PeopleSoft Course ID 001223 Grading Basis GRD

The general music program in the elementary school presented for future music specialists, K-6. Focus is on the synthesis of current philosophy, learning theories and educational practices for teaching elementary school music. Preparation for organizing music curricula and daily lesson plans is included. **Prerequisite(s):** *MUED 273, full admission to teacher education and Level 3 in major applied area.*

MUED 431. Psychology of Music

Credits 3.00 PeopleSoft Course ID 013625 Grading Basis GRD

This course examines the topic of music psychology, and explores current findings and related subtopics, including those from brain sciences. Students will observe the practical application of research findings via practicum placements. Students will reflect on, and synthesize their content knowledge of the topic with their personal field experience knowledge for the purpose of making connections to their own career goals for future employment (e.g. music classroom and music therapy settings).

MUED 470. Marching Band Procedures

Credits 2.00 PeopleSoft Course ID 007323 Grading Basis GRD

Skills and knowledge needed to organize, administer, plan and teach marching band shows including shows for various competitions, parades, football, basketball and festival events; and techniques for developing both marching and playing style through a functional method of fundamental drills.

Prerequisite(s): *MUED 273 or permission of the instructor.*

MUED 471. School Musical, Jazz and Show Choir Procedures

Credits 2.00 PeopleSoft Course ID 006948 Grading Basis GRD

Covers skills and concepts needed to organize, administer, plan, teach and perform in musicals, jazz choirs and show choirs. Highlights techniques of commercial and theatrical vocal style, fundamentals of producing a musical and choreography for the show choir. **Prerequisite(s):** *MUS 317 and MUED 271 are the prerequisites.*

MUED 472. Survey of String Orchestra Repertoire

Credits 2.00 PeopleSoft Course ID 000476 Grading Basis GRD

An examination of concert repertoire for string and full orchestra appropriate for performance by students in grades seven through 12. The course will include a study of evaluation and selection of music appropriate for a specific ensemble. **Prerequisite(s):** *MUED 271 is the prerequisite.*

MUED 474. Guitar Pedagogy and Classroom Methods

Credits 2.00 PeopleSoft Course ID 013400 Grading Basis GRD

Preparation to teach guitar in beginning, intermediate and advanced school music settings. Content includes information specific to guitar pedagogy (e.g. fretboard knowledge, chord shapes), and traditional guitar method approaches to various skills (e.g. reading standard notation, positions, fingerboard harmony). Guitar repertoire, relevant literature, available resources, and the role of the guitar ensemble in public schools will be examined from teaching and administrative perspectives.

MUED 480. Student Teaching

Credits 6.00-12.00 PeopleSoft Course ID 013676 Grading Basis CNC

Enables students to apply, in the public school classrooms and the comprehensive child development programs, those skills and attitudes acquired

in all components of teacher education. Under the guidance of university supervisors, students are provided activities designed to familiarize them with the classroom teacher's role. **Prerequisite(s):** PSYC 160 and EDUC 200/EDUC 360, appropriate methods courses, and permission of the coordinator of field experiences.

MUED 482. Orff & Kodaly: Literature, Principles & Practices

Credits 1.00 PeopleSoft Course ID 010603 Grading Basis GRD

Students will study the repertoire employed in the Orff and Kodaly approaches to music education. They will develop skills and understanding of the principles related to these approaches. Work with peers and school children will provide the opportunity to develop teaching skill. May be repeated for credit.

MUED 485. Teaching Music to Students with Special Needs

Cross listed with: MUED 585

Credits 3.00 PeopleSoft Course ID 013626 Grading Basis GRD

Students will become familiar with trends affecting students with special needs, and introduced to diverse variations in language ability, assessment, inclusion, and music education. Students will collaborate online through discussion forums regarding case study and video presentations. Students will become knowledgeable in language, motor, visual, and social development, connecting current research and theory to classroom practice. Students will also critically assess inclusive school settings.

Music Industry

MUI 221. Survey of Music Industry

Credits 3.00 PeopleSoft Course ID 006513 Grading Basis GRD

An overview of the recording, entertainment and performing arts industries including an examination of the historical, aesthetic and commercial developments of the music industry in the United States.

MUI 230. Music Industry Gateway

Credits 0.00 PeopleSoft Course ID 011840 Grading Basis CNC

Music industry gateway is required to enroll in 300- and 400-level music industry courses. May be repeated once.

MUI 231. Legal Aspects of Music Industry

Credits 3.00 PeopleSoft Course ID 007486 Grading Basis GRD

An examination of the legal issues affecting the performing arts, recording and music publishing fields. Topics include music rights and licensing, Performing arts unions and guilds, artist representation and contractual relationships.

Prerequisite(s): MUI 221 and Music major or Instructor Permission.

MUI 315. Songwriting

Credits 3.00 PeopleSoft Course ID 008298 Grading Basis GRD

An introduction to form, lyric development and melodic structure of contemporary songwriting for commercial entertainment applications. The course will include examination of leadsheet writing, demo production, copyright protection and publishing of commercial songs. **Prerequisite(s):** Music majors /minors: MUI 230 and MUI 231; or permission of the instructor. Music industry minors: MUI 230 and MUI 231 and MUS 140; or permission of the instructor.

MUI 324. Introduction to Audio Devices

Credits 3.00 PeopleSoft Course ID 004346 Grading Basis GRD

Introduction to electronic and digital devices utilized in the sound recording industry. **Prerequisite(s):** PHYS 121 and MUI 230 and MUI 231; or permission of the instructor.

MUI 330. Music Publishing

Credits 3.00 PeopleSoft Course ID 011262 Grading Basis GRD

This course will offer a comprehensive overview of the music publication industry. The focus will be on, but not limited to, mainstream popular music. It

will also consider songwriter/publisher relations, self-publication, as well as an examination of art, religious and educational music publishing. **Prerequisite(s):** MUI 230 and MUI 231; or permission of the instructor.

MUI 400. Pro Tools: Multitrack Recording and Music Production

Credits 3.00 PeopleSoft Course ID 005111 Grading Basis GRD

An introduction to contemporary multi-track recording studio techniques utilizing Pro Tools. Students will be introduced to recording studio design, psycho-acoustics, miking techniques, Musical Instrument Digital Interface and the mixing console. **Prerequisite(s):** MUI 230 and MUI 231 and MUI 324; or permission of the instructor.

MUI 405. Logic Pro: Synthesis and Sound Design

Credits 3.00 PeopleSoft Course ID 012983 Grading Basis GRD

An introduction to analog synthesis, digital synthesis, an overview of conditions and events that led to the development of MIDI, a study of the MIDI protocol itself, as well as Apple Certified instruction in music production utilizing Logic Pro. **Prerequisite(s):** MUI 230 and MUI 231 and MUI 324; or permission of the instructor.

MUI 411. Audio Postproduction

Credits 3.00 PeopleSoft Course ID 007310 Grading Basis GRD

An examination of music and sound used in the broadcast and entertainment media from an intensive, hands-on engineering perspective. The course will feature multiple post-production assignments to be completed in our on-campus Studio B, as well as field trips to off-campus post-production studios.

Prerequisite(s): MUI 230, MUI 324, and MUI 400 or instructor permission.

MUI 415. Songwriting II

Credits 3.00 PeopleSoft Course ID 011265 Grading Basis GRD

This course is a continuation in the study of form, lyric development and melodic structure of contemporary songwriting for commercial entertainment applications. This course will also take into account some basic music business aspects important in the music industry directly related to song writers.

Prerequisite(s): Music majors /minors: MUI 230 and MUI 231; or permission of the instructor. Music industry minors: MUI 230 and MUI 231 and MUS 140; or permission of the instructor.

MUI 422. Concert Production and Promotion

Credits 3.00 PeopleSoft Course ID 007506 Grading Basis GRD

Study of the presentation of cultural and commercial entertainment in the form of concert events from artistic, technical and business viewpoints. The roles of the cultural impresario and concert promoter in contemporary society are examined. **Prerequisite(s):** MUI 230 and MUI 231; or permission of the instructor.

MUI 423. Sound Reinforcement

Credits 3.00 PeopleSoft Course ID 012371 Grading Basis GRD

An introduction to the history, equipment, skills and business of sound reinforcement. The technique of contemporary sound engineers are examined and experienced by the use of audio amplification systems to design and use for public address and musical performance. **Prerequisite(s):** MUI 230 and MUI 231 and MUI 324; or permission of the instructor. MUI 400 is recommended.

MUI 430. Artist Management

Credits 3.00 PeopleSoft Course ID 011264 Grading Basis GRD

This course will evaluate the function of musician/recording artist representatives in the music industry. Focus of discussions will include artist development from early career stages to concert tours, unions, recording companies, personal appearances, contractual agreements, etc. **Prerequisite(s):** MUI 230 and MUI 231; or permission of the instructor.

MUI 435. Marketing in Music Production

Credits 3.00 PeopleSoft Course ID 004582 Grading Basis GRD

Examination of the process of studio production, manufacturing, promotion and distribution of contemporary recordings. Record release programs for independent and major label-controlled products are analyzed. **Prerequisite(s):** MUI 230 and MUI 231; or permission of the instructor.

MUI 440. Entrepreneurship in Music Industry**Credits 3.00 PeopleSoft Course ID 010054 Grading Basis GRD**

The study of business aspects of the music industry managing, marketing, finance and sales. Students develop a comprehensive music business plan. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** MUI 230 and MUI 231 ; or permission of the instructor.

MUI 492. Internship in Music Industry**Credits 3.00 - 6.00 PeopleSoft Course ID 001928 Grading Basis GRD**

A supervised off-campus cocurricular learning activity designed to provide practical experience in the music industry. **Prerequisite(s):** MUI 221 and MUI 230 and MUI 231 or permission of the instructor.

Music Instruction, Applied

MUAP 113A. Small Group Lessons**Credits 1.00 PeopleSoft Course ID 001152 Grading Basis GRD**

Two hours per week. May be repeated. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 114. Group Voice for Musical Theatre Concentrators**Credits 1.00 PeopleSoft Course ID 008738 Grading Basis GRD**

First level voice class for Musical Theatre concentrations in the School of Theatre and Dance. Permission to register must be obtained from the coordinator of the respective applied area. **Prerequisite(s):** Audition and admission to the Musical Theatre concentration in the School of Theatre and Dance.

MUAP 115. Group Voice for Theatre/Dance Majors**Credits 1.00 PeopleSoft Course ID 005648 Grading Basis GRD**

May be repeated for up to four credits. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 200. Applied Music Lesson (Undergraduate)**Credits 1.00 - 3.00 PeopleSoft Course ID 013665 Grading Basis GRD**

Applied weekly lessons for non-majors and secondary instruments. See MyMadison for details. May be repeated for credit. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 205. Small Group Voice for Keyboard Music Majors**Credits 2.00 PeopleSoft Course ID 010749 Grading Basis GRD**

A practical introduction to singing technique and musicianship designed for future choral music teachers and accompanists. Concludes with Vocal Proficiency Examination. Limited to maximum of eight students. May be repeated for credit. Permission to register must be obtained from the coordinator of the respective applied area. **Prerequisite(s):** *Sophomore standing in music or permission of the instructor.*

MUAP 214. Private Voice for Musical Theatre Concentrators**Credits 1.00 PeopleSoft Course ID 006351 Grading Basis GRD**

Private voice lessons for musical theatre concentrators in the School of Theatre and Dance. Permission to register must be obtained from the coordinator of the respective applied area. **Prerequisite(s):** *Permission of the instructor.*

MUAP 234. University Chorus: Tenor/Bass (UCTB)**Credits 1.00 PeopleSoft Course ID 004010 Grading Basis GRD**

The James Madison University Chorus: Tenor/Bass (UCTB) provides an opportunity for singers to explore choral repertoire for lowered and mixed voices from a variety of genres and time periods. This ensemble is open to all

JMU tenor and bass singers without audition. The director reserves the right to limit membership because of balance or space considerations.

MUAP 235. Treble Chamber Choir**Credits 1.00 PeopleSoft Course ID 006572 Grading Basis GRD**

This is an advanced level chamber chorus for women and male countertenors interested in a small choral ensemble experience. Open to all majors, and auditioned at the beginning of every semester, this choir frequently performs off campus as well. Contact the director of choral activities for more information. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 236. University Chorus: Soprano/Alto (UCSA)**Credits 1.00 PeopleSoft Course ID 003451 Grading Basis GRD**

The James Madison University Chorus: Soprano/Alto (UCSA) ensemble provides an opportunity for singers to explore choral repertoire for treble and mixed voices from a variety of genres and time periods. This ensemble is open to all JMU soprano and alto singers without audition. The director reserves the right to limit membership because of balance or space considerations.

MUAP 237. Marching Band (Fall Semester)**Credits 2.00 PeopleSoft Course ID 004219 Grading Basis GRD**

The Marching Band will perform music and drill which is artistically structured. The repertoire will be representative of all styles of music. The Marching Band is required for two years of wind and percussion majors in the music education degree program. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 238. Concert Band**Credits 1.00 PeopleSoft Course ID 004018 Grading Basis GRD**

Open to all interested participants. A wide variety of music is utilized to acquaint the student with different types of band literature. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 239. Symphonic Band**Credits 1.00 PeopleSoft Course ID 001755 Grading Basis GRD**

The JMU Symphonic Band is a select group of brass, woodwind and percussion students who are dedicated to the performance of both traditional and contemporary band literature. The ensemble performs music of all periods and is open to any university student by audition. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 240. Pep Band**Credits 1.00 PeopleSoft Course ID 014440 Grading Basis GRD**

Pep Band is an elective ensemble that serves as a spirited athletic band for JMU men's and women's home and post-season basketball games. The unit will rehearse weekly and perform at the Atlantic Union Bank Center during both regular and post-season games. Students must have instrumental music experience. The class only accepts the following instruments: alto sax, tenor sax, trumpet, mellophone, baritone, tuba (sousaphone) and rhythm section (drumset, guitar and electric bass). Wind players are non-auditioned; rhythm section members must audition in the fall semester prior to registering.

MUAP 300. Applied Music Lesson (Undergraduate)**Credits 1.00 - 3.00 PeopleSoft Course ID 013666 Grading Basis GRD**

Applied weekly lessons for music majors. See MyMadison for details. May be repeated. Permission to register must be obtained from the coordinator of the respective applied area. **Prerequisite(s):** *Music Majors*

MUAP 340. Chorale**Credits 1.00 PeopleSoft Course ID 007299 Grading Basis GRD**

A highly selected, 60-voice mixed choir that performs repertoire from the Renaissance to the contemporary era, both sacred and secular. There are opportunities to perform on and off campus. Membership is by audition. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 341. Madison Singers

Credits 1.00 PeopleSoft Course ID 001510 Grading Basis GRD

Madison singers is a highly select choral chamber ensemble that performs the best of representative choral music from the Renaissance to the present. The ensemble is open to any university student by audition in the fall of each academic year. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 343. Opera Theatre

Credits 1.00 - 2.00 PeopleSoft Course ID 006895 Grading Basis GRD

The preparation and public performance of grand opera, light opera and musicals. Work will include coaching of both music and acting. Credit may vary with permission of instructor depending on the amount of time commitment. Admission is by audition only. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 344. Chamber Orchestra

Credits 1.00 PeopleSoft Course ID 005372 Grading Basis GRD

Open to all university students. Membership is determined by audition. Music written for chamber orchestra from all periods is studied and performed.

MUAP 345. Symphony Orchestra

Credits 1.00 PeopleSoft Course ID 004164 Grading Basis GRD

The JMU Symphony Orchestra is a participating member of the American Symphony Orchestra League. Membership is determined by audition and is open to all university students. Literature performed is from the standard symphonic repertoire.

MUAP 346. Wind Symphony

Credits 1.00 PeopleSoft Course ID 010298 Grading Basis GRD

The JMU Wind Symphony is a highly select group of brass, woodwind and percussion students who are dedicated to the performance of wind orchestra music and chamber music for winds. The ensemble performs music from all periods and is open to any university student by audition in the fall of each academic year. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 347. Jazz Ensemble

Credits 1.00 PeopleSoft Course ID 000946 Grading Basis GRD

Instrumental music performance ensemble of the standard "big band" instrumentation whose repertoire reflects jazz styles from the swing era to contemporary jazz. Admission is by audition. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 348. Jazz Band

Credits 1.00 PeopleSoft Course ID 008267 Grading Basis GRD

Instrumental ensemble, performing the standard and contemporary repertoire of American music with emphasis on the jazz idiom. Jazz band is open to all JMU students by audition. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 349. Monticello Strings Faculty and Students Ensemble

Credits 1.00 PeopleSoft Course ID 013326 Grading Basis GRD

A joint string ensemble of string faculty and students, with a mission to provide mentoring, hands-on and shared experiences in learning, rehearsing, and performing string chamber orchestra repertoire from the Baroque to Contemporary periods. In addition, the ensemble focuses on creative and

scholarly endeavors, collaboration between faculty and students, and university outreach with performances on and off campus. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 350. String Ensemble

Credits 1.00 PeopleSoft Course ID 002504 Grading Basis GRD

A rehearsal and performance ensemble where students of similar technical and musical ability are grouped in traditional string or piano trios, quartets and quintets, and present public performances of important compositions from the chamber music literature of all historical periods. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 351. Woodwind Ensemble

Credits 1.00 PeopleSoft Course ID 000136 Grading Basis GRD

Woodwind ensembles consisting of quintets or other smaller and larger combinations, limited to specially selected personnel through auditions. Concerts and other performances are prepared from a variety of literature from the classical period to the present. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 352. Brass Band

Credits 1.00 PeopleSoft Course ID 001647 Grading Basis GRD

Open to all university students by audition. A select brass and percussion ensemble limited to the standard instrumentation of the "British-style" brass band. The ensemble performs literature of all styles from the extensive brass band tradition. The band typically participates in the annual NABBA championships. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 353. Guitar Ensemble

Credits 1.00 PeopleSoft Course ID 003788 Grading Basis GRD

The performance of guitar music from Renaissance to 20th century for duos, trios and quartets. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 354. Percussion Ensemble

Credits 1.00 PeopleSoft Course ID 000803 Grading Basis GRD

The study and preparation for public performance of percussion ensemble literature. The ensemble is open to all university students by audition. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 355. Jazz Chamber Ensemble

Credits 1.00 PeopleSoft Course ID 006321 Grading Basis GRD

Open by audition to students demonstrating a high degree of skill in jazz improvisation. Concerts and other performances are prepared from a variety of literature from early jazz to the present day. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 357. Collaborative Piano

Credits 1.00 PeopleSoft Course ID 010226 Grading Basis GRD

A course in basic collaborative skills and style characteristics for pianists. Students will be assigned to vocal or instrumental studios and have the opportunity to perform in master class and private coaching sessions.

Prerequisite(s): A minimum grade of "C-" in MUS 303 or MUS 303A.

MUAP 360. Opera/Music Theatre Orchestra

Credits 1.00 PeopleSoft Course ID 008777 Grading Basis GRD

This ensemble will serve as the accompanying ensemble for staged productions within the School of Music and the School of Theatre and Dance. Enrollment in this course will be open to all students at the university by audition. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 362. Brass Chambers Ensembles

Credits 1.00 PeopleSoft Course ID 011895 Grading Basis GRD

Brass chamber ensembles consisting of quartets, quintets or larger combinations, limited to specially selected personnel through auditions. Concerts and other performances are prepared and presented from literature spanning the Renaissance to the present day. Permission to register must be obtained from the coordinator of the respective applied area. **Prerequisite(s):** *Permission of the instructor.*

MUAP 364. Camerata Strings

Credits 1.00 PeopleSoft Course ID 011902 Grading Basis GRD

Camerata Strings is a select instrumental string ensemble that performs a broad range of string ensemble literature from the 1600s to the present. The ensemble is open to any student of the university through competitive auditions held at the start of each spring semester. Permission to register must be obtained from the coordinator of the respective applied area. **Prerequisite(s):** *Participants must complete competitive auditions at the start of the spring semester and, based on audition outcomes, be offered membership by the Music Director of the ensemble.*

MUAP 380. Collegium Musicum

Credits 1.00 PeopleSoft Course ID 011938 Grading Basis GRD

The Collegium Musicum is a select vocal/instrumental ensemble dedicated to the historically-informed performance of early music (music composed before ca. 1700) Repertoire includes major works primarily of the Renaissance and early Baroque era. Membership is by audition or invitation. May be repeated for credit. Permission to register must be obtained from the coordinator of the respective applied area.

MUAP 381. Bach Aria Group

Credits 1.00 PeopleSoft Course ID 013231 Grading Basis GRD

The Bach Aria Group is a select vocal/instrumental ensemble dedicated to the historically-informed performance of arias and small ensembles from the Cantatas, Oratorios and Passions of J.S.Bach. Repertoire is specifically limited to this material. Membership is voluntary, and by audition or invitation. May be repeated for credit. This ensemble will not fulfill the music major requirement for a minimum of one ensemble per semester. Permission to register must be obtained from the coordinator of the respective applied area.

Nonprofit Studies

NPS 300. Introduction to Nonprofits

Credits 3.00 PeopleSoft Course ID 011578 Grading Basis GRD

An introduction to the development of the nonprofit sector in the American context exploring history, theories, legal issues, governance and ethical considerations. Global nonprofits are also explored. Provides a foundation for subsequent work in the nonprofit studies minor. **Prerequisite(s):** *Sophomore standing with a declared major.*

NPS 320. Nonprofit Management

Credits 3.00 PeopleSoft Course ID 011579 Grading Basis GRD

A study of organizational and management functions in the nonprofit sector. Examination of the unique role of volunteers, boards and public relations in the nonprofit environment. **Prerequisite(s):** *NPS 300 and junior standing.*

NPS 375. Grant Writing for Agencies

Cross listed with: *FAM 375, GERN 375, SOWK 375*

Credits 3.00 PeopleSoft Course ID 011229 Grading Basis GRD

Emphasizing active learning, this course teaches the basics of grant and proposal writing. Efficient research, persuasive prose and the importance of relationships are stressed. Private and corporate philanthropy and government grants are examined.

NPS 400. Internship/Practicum in Nonprofit Studies

Credits 4.00 - 6.00 PeopleSoft Course ID 011580 Grading Basis GRD

Supervised internship/practicum in experience in a nonprofit organization setting that allows experiential learning and practice experiences. A research or applied paper, learning journal and presentation based on the experience are required. *4 credits (160 hours in agency), 6 credits (240 hours in agency).*

Prerequisite(s): *NPS 300 and the discipline specific elective.*

NPS 450. Nonprofit Studies Capstone Seminar

Credits 3.00 PeopleSoft Course ID 011581 Grading Basis GRD

The capstone seminar is designed to integrate and apply knowledge from the student's major and the Nonprofit Studies minor. A substantial, individualized project will strengthen the student's capabilities in research and/or applied knowledge, information access, and self-directed learning. **Prerequisite(s):** *NPS 300, NPS 320, NPS 400, and discipline elective. Related elective may be taken concurrently.*

NPS 487. Special Topics in Nonprofit Studies

Credits 3.00 PeopleSoft Course ID 012196 Grading Basis GRD

Examination of selected topics in nonprofit studies that are of current importance in the nonprofit arena. Course may be repeated for credit. **Prerequisite(s):** *NPS 300.*

NPS 490. Special Studies in Nonprofit Studies

Credits 1.00 - 3.00 PeopleSoft Course ID 012197 Grading Basis GRD

This course is designed to provide capable nonprofit studies minors an opportunity to complete independent study under faculty supervision. Course may be repeated for credit. **Prerequisite(s):** *NPS 300, NPS 320 and one additional course in the minor or permission of the instructor.*

Nursing

NSG 300. Strategies for Success in Nursing

Credits 1.00 PeopleSoft Course ID 014001 Grading Basis GRD

This course introduces freshman and transfer nursing majors to the nursing curriculum and electives in other disciplines that relate to the goals and objectives of the program. This course will include instruction on campus student resources, time management and study skills, development of a clear academic plan, and nursing career options.

NSG 302. Behavioral and Mental Health in Children and Adolescents

Credits 2.00 PeopleSoft Course ID 013471 Grading Basis GRD

This course will explore the state of mental and behavioral health of children and adolescents. It will examine the neuropathophysiological nature of mental and behavioral illnesses, health promotion, and care of children and adolescents.

NSG 306. Combating Childhood Obesity

Credits 1.00 PeopleSoft Course ID 014003 Grading Basis GRD

This course will examine the current evidence and issues related to obesity in children and adolescents in the United States. Emphasis is placed on the health-related outcomes of childhood obesity for individuals, families and communities. Analysis of individual and public health approaches to reduce the prevalence of childhood obesity will be discussed.

NSG 307. Transcultural Concepts in Nursing

Credits 2.00 PeopleSoft Course ID 014004 Grading Basis GRD

This course examines concepts of cultural awareness and culturally competent care with individuals, families and communities. The influence of cultural beliefs and practices on health care that are specific to identified cultures is emphasized.

NSG 308. Empowerment and Resilience

Credits 1.00 PeopleSoft Course ID 014005 Grading Basis GRD

This elective course explores traumatic events and the ongoing psychological and social stress responses that result. Empowerment and resilience conceptual premises will be examined as elements to overcoming trauma and/or traumatic events. Historical traumatic community events will be used to highlight strategies of recognition and resilience and provide a micro to macro level perspective.

NSG 309. Trauma and the Continuum of Care

Credits 1.00 PeopleSoft Course ID 014006 Grading Basis GRD

This course explores adult health alterations that develop as a result of a trauma. Students will apply the nursing process to analyze psychological, physical, social and secondary stress as a result of trauma care situations. Students will analyze a plan of care that engages an interdisciplinary team approach to the care process. Students will develop an understanding of the rehabilitation process and long term outcomes of the traumatically injured.

NSG 310. Helping Persons in Pain

Credits 2.00 PeopleSoft Course ID 011403 Grading Basis GRD

This course open to all students from all majors, is an examination of pain, its impact on people, causes, treatments and the role of health professionals. Emphasis is placed on understanding how people experience pain and its effect on quality of life.

NSG 314. Rural Health: an Interprofessional Approach

Cross listed with: HTH 314, IPE 314, SOWK 314

Credits 3.00 PeopleSoft Course ID 013642 Grading Basis GRD

Students study, observe and participate in interprofessional assessment, planning and delivery of community-based primary health care in partnership with residents and agencies of a host rural county. Learning activities will emphasize rural culture, rural health care and interprofessional practice.

NSG 317. History of Nursing

Credits 1.00 PeopleSoft Course ID 012218 Grading Basis GRD

An elective nursing course that explores fundamental aspects of nursing history including pertinent nursing founders and leaders as well as examination of the many influences that have shaped the nursing profession. Review of nursing within its historical context provides an opportunity to consider changes for the future.

NSG 318. Nursing, Chronic Illness and Health in a Global Context

Credits 2.00 PeopleSoft Course ID 014008 Grading Basis GRD

Non-communicable diseases (NCDs/ a.k.a. chronic illnesses) are universal. The course provides students with an introduction to global health care systems models, and concepts and their influence on health disparities and delivery of healthcare, focusing on NCDs. Additionally, students will examine ways that nurses and nursing can meet the challenges of addressing NCDs at a global level.

NSG 319. Understanding Sexuality across the Health-Illness Continuum

Credits 2.00 PeopleSoft Course ID 014009 Grading Basis GRD

This course examines how illness affects sexuality (physiologically, psychologically and culturally) across the lifespan. Sources of interventions and support for issues of sexuality and chronic illness will be addressed.

NSG 321. Faith Community Nursing

Credits 1.00 PeopleSoft Course ID 013988 Grading Basis GRD

This course is based on the accepted philosophy and practice of Faith Community Nursing and examines the roots of health and healing found in many religious traditions. Critical thinking strategies, such as Socratic questioning, are used to analyze the spiritual dimension of health and healing for the practitioner as well as clients they serve. Students explore the practice of nursing in faith communities.

NSG 322. Integrative Health Care

Credits 2.00 PeopleSoft Course ID 012491 Grading Basis GRD

This course examines the principles, practices, and outcomes of complementary therapies and alternative healing that are widely used in the general population. The integration of alternative and conventional health practices will be examined. Ethical, legal and professional issues will be explored.

NSG 324. R.N./B.S.N. Strategies for Success

Credits 1.00 PeopleSoft Course ID 013320 Grading Basis GRD

This course is designed to provide strategies for academic success in an online learning environment for students in the R.N. to B.S.N. program. Students apply concepts of scholarly writing and identify research. An emphasis is placed on competence with technology and working collaboratively within an online environment.

NSG 325. Concepts in Aging

Credits 3.00 PeopleSoft Course ID 011463 Grading Basis GRD

This online course examines evidence-based knowledge needed to provide holistic care for an aging population. Issues related to legal and ethical aspects of care, health promotion, chronic health conditions and special issues related to gerontological nursing care are examined. **Prerequisite(s): R.N.-B.S.N. students only.**

NSG 326. Care and Consideration for Children with Special Needs

Credits 1.00 PeopleSoft Course ID 013025 Grading Basis GRD

Open to students from any major. Students will gain insight into the lives of children with special needs and discuss how having children with special needs affects the entire family. A variety of topics such as autism, brain injury, and other disabilities will be investigated. Learning activities include guest speakers, discussion, and hands-on service learning. Students must provide their own transportation to service learning sites off campus.

NSG 328. Life, Death, and the In-Between

Credits 1.00 PeopleSoft Course ID 013027 Grading Basis GRD

This course focuses on preparing the student to give patient-centered end-of-life care. Using a variety of learning methods, the student will examine theories and care models, and will discuss current topics surrounding death and dying, including social, cultural, ethical, spiritual and legal issues.

NSG 329. Best Practices in Diabetes Care

Credits 2.00 PeopleSoft Course ID 013028 Grading Basis GRD

The student will develop a basic understanding of the current practices related to diabetes care and the impact of a diabetes diagnosis on the individual, family and community. The content is centered around the American Association of Diabetes Educators (AADE) 7 Self-Care Behaviors: healthy eating, being active, monitoring, taking medications, problem solving, healthy coping and reducing risks.

NSG 330. Medical Innovations

Credits 3.00 PeopleSoft Course ID 013989 Grading Basis GRD

In this course, pre-professional health, pre-nursing and engineering students will work in interprofessional teams to develop and communicate solutions to a community health challenge. Students will use innovative MakerSpace technologies to produce a tangible product aimed at improving the challenge while also exploring technology's potential to cause harm. In addition to instruction of the technologies, students will be taught problem solving, collaboration, and leadership skills.

NSG 333. Health Assessment

Credits 3.00 PeopleSoft Course ID 008907 Grading Basis GRD

This course examines the principles and techniques of nursing assessments focusing on health history taking, review of systems and physical examination techniques for individuals across the lifespan. Clinical decision making is emphasized using a holistic approach that takes into account physical, genetic, cultural, psychological, social, spiritual and environmental variables that impact health. **Prerequisite(s):** *Admission to the R.N.-B.S.N. program*

NSG 350. Foundations of Nursing

Credits 2.00 PeopleSoft Course ID 013128 Grading Basis GRD

This course provides an overview of foundational principles of professional nursing practice. Students will be introduced to the evolution of nursing, basic nursing theory and knowledge, and beginning concepts. This course promotes self-analysis and socialization into the role of the professional nurse.

NSG 350H. Foundations of Nursing

Credits 2.00 PeopleSoft Course ID 013991 Grading Basis GRD

This course provides an overview of foundational principles of professional nursing practice. Students will be introduced to the evolution of nursing, basic nursing theory and knowledge, and beginning concepts. This course promotes self-analysis and socialization into the role of the professional nurse. Students will explore the healthcare literature to identify and develop an honors thesis focus. **Prerequisite(s):** *Admission to the honors program.*

NSG 351. Health Assessment

Credits 3.00 PeopleSoft Course ID 013129 Grading Basis GRD

This course develops knowledge and skills necessary to gather, organize, and present relevant health data that includes wellness and illness considerations across the life cycle. Emphasis is placed on systematic strategies, frameworks, and skills used to conduct both comprehensive and need-specific health assessments for individuals in the context of their family and community.

Prerequisite(s): *formal acceptance into the Nursing Program.*

NSG 352. Clinical Applications & Reasoning in Nursing Care I

Credits 4.00 PeopleSoft Course ID 013130 Grading Basis GRD

Through didactic learning, students learn theories, rationale, and principles underlying the application of acute care skills in nursing practice. In the laboratory, students will practice and demonstrate mastery of selected skills. In the clinical setting, students will apply knowledge through clinical reasoning in planning and facilitating nursing care for patients and their families.

Prerequisite(s): *Formal acceptance to the nursing program is the prerequisite.*

Corequisite(s): NSG 352L.

NSG 352L. Clinical Applications & Reasoning in Nursing Care I Clinical

Credits 2.00 PeopleSoft Course ID 013131 Grading Basis CNC

Through didactic learning, students learn theories, rationale, and principles underlying the application of acute care skills in nursing practice. In the laboratory, students will practice and demonstrate mastery of selected skills. In the clinical setting, students will apply knowledge through clinical reasoning in planning and facilitating nursing care for patients and their families.

Prerequisite(s): *Formal acceptance to the nursing program is the prerequisite.*

Corequisite(s): NSG 352.

NSG 353. Pathophysiology & Pharmacology

Credits 4.00 PeopleSoft Course ID 013132 Grading Basis GRD

This course is a comprehensive examination of the principles of pathophysiology and pharmacology for nurses. Emphasis will be placed on concepts and rationales necessary for clinical decision making and nursing care of patients with select disease processes.

NSG 354. The Art and Science of Nursing

Credits 2.00 PeopleSoft Course ID 013226 Grading Basis GRD

This course is designed to provide an overview of current issues relevant to the art and science of the practicing nurse. This course will provide the student with a concentrated focus on the role of the professional nurse and the nursing profession. The course explores nursing theory, health care models of practice, diversity issues, as well as legal and ethical realities within the healthcare delivery system.

NSG 354H. The Art and Science of Nursing

Credits 2.00 PeopleSoft Course ID 013992 Grading Basis GRD

This course is designed to provide an overview of current issues relevant to the art and science of the practicing nurse. This course will provide the student with a concentrated focus on the role of the professional nurse and the nursing profession. The course explores nursing theory, health care models of practice and diversity issues, as well as legal and ethical realities within the healthcare delivery system. Students will also demonstrate an understanding of the ethical component of developing and conducting research. **Prerequisite(s):** *Admission to the honors program.*

NSG 355. Women's Health

Credits 3.00 PeopleSoft Course ID 013178 Grading Basis GRD

This course promotes synthesis of concepts and principles utilized in health promotion, risk reduction and critical reasoning in the management of women's health care. Areas of focus include women's health issues, perinatal care of mothers and infants, and gynecological health. Clinical experiences provide students with opportunities to apply evidence based practice for women/newborn/family units of diverse cultural backgrounds. **Prerequisite(s):** NSG 350, NSG 351, NSG 352, NSG 352L, NSG 353. **Corequisite(s):** NSG 355L.

NSG 355L. Women's Health Clinical

Credits 1.00 PeopleSoft Course ID 013179 Grading Basis CNC

This course promotes synthesis of concepts and principles utilized in health promotion, risk reduction and critical reasoning in the management of women's health care. Areas of focus include women's health issues, perinatal care of mothers and infants, and gynecological health. Clinical experiences provide students with opportunities to apply evidence based practice for women/newborn/family units of diverse cultural backgrounds. **Prerequisite(s):** NSG 350, NSG 351, NSG 352, NSG 352L, NSG 353. **Corequisite(s):** NSG 355.

NSG 356. Clinical Applications & Reasoning in Nursing Care II

Credits 4.00 PeopleSoft Course ID 013180 Grading Basis GRD

This course focuses on pathophysiologic and pharmacologic concepts and principles of nursing process, health promotion, risk reduction, clinical decision making, and collaborative management of care for adults experiencing moderate to severe health alterations. Students will apply concepts, theories and skills in the nursing care of adults. **Prerequisite(s):** NSG 350, NSG 351, NSG 352, NSG 352L, NSG 353. **Corequisite(s):** NSG 356L.

NSG 356L. Clinical Applications & Reasoning in Nursing Care II Clinical

Credits 2.00 PeopleSoft Course ID 013181 Grading Basis CNC

This course focuses on pathophysiologic and pharmacologic concepts and principles of nursing process, health promotion, risk reduction, clinical decision making, and collaborative management of care for adults experiencing moderate to severe health alterations. Students will apply concepts, theories and skills in the nursing care of adults. **Prerequisite(s):** NSG 350, NSG 351, NSG 352, NSG 352L, NSG 353. **Corequisite(s):** NSG 356.

NSG 357. Psychiatric Mental Health Nursing

Credits 3.00 PeopleSoft Course ID 013182 Grading Basis GRD

This course examines the pathophysiology, psychosocial manifestations, psychopharmacological and psychiatric mental health nursing treatment of

selected mental illnesses. Analysis of the role and practice of psychiatric mental health nursing both as a nursing specialty and as an integral facet of general nursing are emphasized. **Prerequisite(s):** NSG 350, NSG 351, NSG 352, NSG 352L, NSG 353. **Corequisite(s):** NSG 357L.

NSG 357L. Psychiatric Mental Health Nursing Clinical

Credits 1.00 PeopleSoft Course ID 013183 Grading Basis CNC

This course examines the pathophysiology, psychosocial manifestations, psychopharmacological and psychiatric mental health nursing treatment of selected mental illnesses. Analysis of the role and practice of psychiatric mental health nursing both as a nursing specialty and as an integral facet of general nursing are emphasized. **Prerequisite(s):** NSG 350, NSG 351, NSG 352, NSG 352L and NSG 353. **Corequisite(s):** NSG 356

NSG 360. HHS in Costa Rica: Interprofessional Perspective

Credits 2.00-4.00 PeopleSoft Course ID 014052 Grading Basis CNC

In this course students from nursing and other health-related majors will explore the health needs and the health and human services delivery system in Costa Rica, as well as the history and culture of this Central American country. Students will examine issues that impact health in the United States and Costa Rica and the roles of health care professionals in the delivery of healthcare. This immersion experience includes home stay with a host family and Spanish language study. **Prerequisite(s):** *Nursing (B.S.N. and R.N. to B.S.N.) and other health-related majors only.* **Corequisite(s):** *R.N. to B.S.N. students only: NSG 367 and NSG 469.*

NSG 361. International Health Perspectives: Malta

Credits 4.00 PeopleSoft Course ID 014047 Grading Basis GRD

In this course, students will be immersed in the history and culture of communities within Malta to enhance knowledge and understanding of healthcare challenges unique to this population. Students will examine how culture, lifestyle and other social determinants of health impact the health and well-being of the Maltese people. An emphasis will be placed on understanding health care challenges unique to the Maltese. **Prerequisite(s):** *Declared nursing or health-related major.*

NSG 363. Health Care in Spain: A Cross Cultural Exploration of Illness and Wellness

Credits 4.00 PeopleSoft Course ID 014053 Grading Basis GRD

In this course students will explore the health care system of Tarragona, Spain, through a partnership with the faculty of nursing at Universitat Rovira I Virgili. Through an international lens, students will learn about the Spanish nursing profession and related health fields, as well as the unique history, language and culture of this Catalan region of Spain. Students will explore the ways that Spanish health professionals address health needs in both acute and community care settings in the context of the national health system, and they will compare and contrast this with their knowledge of the U.S. health system approach. This immersion experience includes home stay with a Spanish nursing student and Spanish language study. Minimal competence in Spanish preferred. **Prerequisite(s):** *Nursing or health-related major.*

NSG 367. R.N. to B.S.N. Community Clinical Costa Rica

Credits 1.00 PeopleSoft Course ID 014268 Grading Basis CNC

This practicum for R.N.-B.S.N. students transitions practice into the B.S.N. role through mentored clinical experiences at selected community sites. Emphasis is on collaborative nursing care with individuals, families and groups within the community. Experiences include concepts of health promotion and disease prevention and management of acute or chronic illness. **Prerequisite(s):** *Admission to the R.N. to B.S.N. program or accepted VCCS co-enrollment student.* **Corequisite(s):** *NSG 360 and NSG 469.*

NSG 368. Chronic Illness: Treatment Strategies for Substance Use Disorders

Credits 2.00 PeopleSoft Course ID 013993 Grading Basis GRD

This course examines the urgent need for all nurses to have a better understanding of substance use disorders and available treatment strategies to help address the current national healthcare crisis related to substance abuse and deaths attributed to opioids. Nurses interact with individuals dealing with an array of chronic health issues including the use and abuse of psychoactive substances. This course will help prepare nurses who are often first to recognize problems related to substance use disorders in hospitals and their communities. **Prerequisite(s):** *NSG 357 and NSG 357L.* **Corequisite(s):** *NSG 357 and NSG 357L.*

NSG 390. Impact of Chronic Illness

Credits 3.00 PeopleSoft Course ID 012401 Grading Basis GRD

This course will explore core concepts of chronic illness across the lifespan from an interdisciplinary perspective. Epidemiology, economics, ethics, culture, family and policy will be emphasized. These topics and concepts will be related to model(s) of chronic care.

NSG 391. Living Successfully with Chronic Illness

Credits 3.00 PeopleSoft Course ID 012402 Grading Basis GRD

This course will examine models and strategies that aid individuals to live successfully with chronic illness. An interdisciplinary evidence-based approach will be used to investigate how outcomes may be improved through the individual's integration of lifestyle changes within the context of culture and family.

NSG 393. Power-based Personal Violence

Credits 1.00 PeopleSoft Course ID 013418 Grading Basis GRD

This course introduces students to the roots of violence, including the political, cultural, social and economic structures that perpetuate violence, and explores approaches to changing those structures in order to reduce or end violence. Students will think critically about the local and global impact of violence and how it intersects with other forms of oppression, and they will achieve an understanding of these issues that will be useful intellectually and personally.

NSG 415. Ethical Decision-Making in Healthcare: an Interprofessional Approach

Cross listed with: *IPE 415*

Credits 1.00 PeopleSoft Course ID 011964 Grading Basis OPT

Health care ethics is a shared, relevant concern among health and human service disciplines and is an ideal vehicle for students from different fields to learn about one another's disciplines and to participate in interprofessional team analysis, discussion, and problem-solving. We have designed an integrated cross-disciplinary learning experience for students interested in the complex, real-world dilemmas encountered in practice. The readings and activities will emphasize ethical, legal, moral and spiritual issues and principles for practice within the context of communicating in interprofessional teams.

NSG 417. Women's Global Health and Human Rights

Cross listed with: *HTH 417, WGSS 417*

Credits 3.00 PeopleSoft Course ID 013705 Grading Basis GRD

An international and human rights approach providing an overview of health issues within the context of a woman's life cycle. Attention will be given to critical issues of women's health such as access to health care and gender based violence. Such issues as sexuality, nutrition, diseases affecting women, violence, harmful traditional practices, and sex trafficking will be discussed.

NSG 450. Nursing Inquiry and Research Methods

Credits 3.00 PeopleSoft Course ID 013267 Grading Basis GRD

This course will enhance students' ability to locate and critically appraise evidence-based guidelines and nursing research to determine their applicability to nursing practice. Students critically examine the links among nursing research, theory and practice. Students will develop an understanding of the underlying paradigms and activities within quantitative and qualitative research.

Prerequisite(s): *Formal acceptance into the nursing major.*

NSG 450H. Nursing Inquiry and Research Methods

Credits 3.00 PeopleSoft Course ID 013994 Grading Basis GRD

This course will enhance the students' ability to locate and critically appraise evidence-based guidelines and nursing research to determine their applicability to nursing practice. Students critically examine the links among nursing research theory, and practice. Students will develop an understanding of the underlying paradigms and activities within quantitative and qualitative research. Students will synthesize literature from individual review of research and prepare for public presentation. **Prerequisite(s):** *Formal acceptance into the nursing major and the honors program.*

NSG 451. Child Health

Credits 3.00 PeopleSoft Course ID 013268 Grading Basis GRD

This course promotes the development of knowledge, skills and the ability to care for children including those with acute and chronic illnesses/conditions. Learning will focus on the unique healthcare needs of children with emphasis on family centered care. Students will apply knowledge through clinical reasoning in planning and facilitating nursing care for children and families.

Prerequisite(s): *NSG 355, NSG 355L, NSG 356, NSG 356L, NSG 357 and NSG 357L. Corequisite(s): NSG 451L.*

NSG 451L. Child Health Clinical

Credits 1.00 PeopleSoft Course ID 013269 Grading Basis CNC

This course promotes the development of knowledge, skills and the ability to care for children including those with acute and chronic illnesses/conditions. Learning will focus on the unique healthcare needs of children with emphasis on family centered care. Students will apply knowledge through clinical reasoning in planning and facilitating nursing care for children and families.

Prerequisite(s): *NSG 355, NSG 355L, NSG 356, NSG 356L, NSG 357, NSG 357L. Corequisite(s): NSG 451.*

NSG 452. Clinical Applications and Reasoning in Nursing Care III

Credits 4.00 PeopleSoft Course ID 013270 Grading Basis GRD

This course focuses on the integration of complex pathophysiologic and pharmacologic concepts and principles for adults experiencing moderate to severe health alterations. Students will apply the nursing process to promote health and safety, to augment clinical reasoning and clinical decision making, and to integrate interprofessional collaboration in the care of patients.

Prerequisite(s): *NSG 352, NSG 352L, NSG 356 and NSG 356L.*

NSG 452L. Clinical Applications & Reasoning III Clinical

Credits 2.00 PeopleSoft Course ID 013464 Grading Basis CNC

This course focuses on the integration of complex pathophysiologic and pharmacologic concepts and principles for adults experiencing moderate to severe health alterations. Students will apply the nursing process to promote health and safety, to augment clinical reasoning and clinical decision making, and to integrate interprofessional collaboration in the care of patients.

Prerequisite(s): *NSG 352, NSG 352L, NSG 356 and NSG 356L. Corequisite(s): NSG 452.*

NSG 453. Population-Centered Care in the Community

Credits 3.00 PeopleSoft Course ID 013271 Grading Basis GRD

Students will engage in the systematic assessment of individuals and vulnerable populations in community settings and work collaboratively to lead

the development and implementation of evidence-based, population-focused community health nursing interventions. The impact of increasing societal and cultural changes across the life span will be analyzed. Students will incorporate theoretical concepts of community-based health promotion and disease prevention of vulnerable populations into their nursing practice. **Prerequisite(s):** *NSG 355, NSG 355L, NSG 356, NSG 356L, NSG 357, NSG 357L, NSG 451, NSG 451L, NSG 452 and NSG 452L. Corequisite(s): NSG 453L, NSG 454 and NSG 456.*

NSG 453L. Population-Centered Care in the Community Clinical

Credits 2.00 PeopleSoft Course ID 013272 Grading Basis CNC

Students will engage in the systematic assessment of individuals and vulnerable populations in community settings and work collaboratively to lead the development and implementation of evidence-based, population-focused community health nursing interventions. The impact of increasing societal and cultural changes across the life span will be analyzed. Students will incorporate theoretical concepts of community-based health promotion and disease prevention of vulnerable populations into their nursing practice through clinical experiences. **Prerequisite(s):** *NSG 355, NSG 355L, NSG 356, NSG 356L, NSG 357, NSG 357L, NSG 451, NSG 451L, NSG 452 and NSG 452L. Corequisite(s): NSG 453, NSG 454, NSG 455 and NSG 456.*

NSG 454. Transition to Practice

Credits 3.00 PeopleSoft Course ID 013340 Grading Basis GRD

This course enhances clinical reasoning in the context of communication and teamwork, patient-centered care, evidence-based practice, and quality improvement. Students will explore pathways for licensure and prepare for a career in nursing. Current issues in leadership, risk management, health policy, health economics and political action will be explored. An emphasis will be placed on the role of the nurse in advocating for quality and safety in healthcare teams. **Prerequisite(s):** *NSG 355, NSG 355L, NSG 356, NSG 356L, NSG 357, NSG 357L, NSG 450, NSG 451, NSG 451L, NSG 452 and NSG 452L.*

Corequisite(s): *NSG 453 and NSG 453L.*

NSG 455. Nursing Informatics

Credits 3.00 PeopleSoft Course ID 013342 Grading Basis GRD

This course explores nursing informatics and technology applications in health care. Emphasis is on preparing entry-level nurses with core nursing informatics competencies. A major theme is the use of information systems and technologies to improve the quality and safety of patient care in a changing health care environment. Students will develop their nursing informatics knowledge and skills through reading, discussions, exploration and utilization of electronic modalities. **Prerequisite(s):** *Formal acceptance into the nursing program; completion of NSG 350, NSG 354 and NSG 450.*

NSG 455H. Nursing Informatics

Credits 2.00 PeopleSoft Course ID 014021 Grading Basis GRD

This course explores nursing informatics and technology applications in health care. Emphasis is on preparing entry level nurses with core nursing informatics competencies. A major theme is the use of information systems and technologies to improve the quality and safety of patient care in a changing health care environment. Students will develop their nursing informatics knowledge and skills through reading, discussions, exploration and utilization of electronic modalities. Students will analyze, assess and present individually an IHI Quality Assessment of a healthcare site. **Prerequisite(s):** *Admission to the nursing major and honors program.*

NSG 456. Capstone

Credits 4.00 PeopleSoft Course ID 013343 Grading Basis GRD

The capstone experience emphasizes continued synthesis of and competence in the nursing process, critical thinking, prioritization of care and clinical skills in order to provide safe, high quality nursing care under the direct supervision of faculty and clinical nurse preceptors.

Prerequisite(s): *NSG 355, NSG 355L, NSG 356, NSG 356L, NSG 357, NSG 357L, NSG 450, NSG 451, NSG 451L, NSG 452 and NSG 452L.* **Corequisite(s):** *NSG 453 and NSG 453L.*

NSG 460. Healthcare Informatics

Credits 3.00 PeopleSoft Course ID 012285 Grading Basis GRD

This course focuses on the nature and functions of present and future applications of health care informatics. Emphasis is on preparing current and future health care professionals to plan, design, collaborate with other health care disciplines, and utilize healthcare informatics for effective health care delivery, health organizational management, and improved client outcomes.

Prerequisite(s): *Admitted R.N.-B.S.N. majors only.*

NSG 461. Pathophysiology and Pharmacology

Credits 3.00 PeopleSoft Course ID 011569 Grading Basis GRD

This course, offered to RN-BSN program students, provides an examination of complex physiologic responses and clinical sequel in major body systems in relation to pathologic processes. Emphasis is placed upon physiologic compensation and defense responses. Pharmacologic management of pathology is investigated. **Prerequisite(s):** *Admission to RN-BSN program.*

NSG 462. Issues in Contemporary Nursing Practice

Credits 3.00 PeopleSoft Course ID 011568 Grading Basis GRD

This course examines contemporary issues related to the profession of nursing. Historical and modern day influences that impact the profession of nursing are explored. Students are introduced to resources that support the individual nurse and the profession of nursing to navigate current issues and create resolutions. Multiple asynchronous course activities are utilized to engage the adult learner. **Prerequisite(s):** *Admission to R.N.-B.S.N. program.*

NSG 463. Professional Role Transition

Credits 3.00 PeopleSoft Course ID 011567 Grading Basis GRD

This online course expands the students' current knowledge of concepts related to nursing theory, nursing image and professional role development at the B.S.N. level. Emphasis will be placed upon leadership and management skill development at the personal level. **Prerequisite(s):** *Admission to R.N.-B.S.N. program.*

NSG 464. Introduction to Nursing Research

Credits 3.00 PeopleSoft Course ID 011566 Grading Basis GRD

This online course will focus on the study of research methods that generate quantitative and qualitative data. Students will examine the research process with an emphasis on critique of research methodologies and application of research findings to nursing practice. **Prerequisite(s):** *Admission to R.N.-B.S.N. program.*

NSG 466. Community Health Practicum

Credits 1.00 PeopleSoft Course ID 011565 Grading Basis CNC

This practicum, for R.N.-B.S.N. students, transitions practice into the B.S.N. role through mentored clinical experiences at selected community sites. Emphasis is on collaborative nursing care with individuals, families and groups within the community. Experiences include concepts of health promotion and disease prevention and management of acute or chronic illness.

Prerequisite(s): *Admission to R.N.-B.S.N. program.*

NSG 469. Caring for the Public's Health: Community Health Nursing

Credits 4.00 PeopleSoft Course ID 011850 Grading Basis GRD

This course provides RN-BSN students a perspective of professional nursing at the community level of practice. Course content will provide an overview of specific issues and societal concerns that affect community health nursing practice including historical impact of public health, epidemiology, health promotion and disease prevention, vulnerable populations; communicable disease risk and prevention; and the diversity of the role of the community health nurse. **Prerequisite(s):** *Admission to R.N.-B.S.N. program.*

NSG 471. Leadership and Management in Health Care

Credits 3.00 PeopleSoft Course ID 012222 Grading Basis GRD

This online course explores the role of the nurse as a leader in professional health care delivery through an examination of healthcare organizations, leadership theories and management styles, organizational change, conflict resolution, fiscal and economic issues, and professional political responsibility. **Prerequisite(s):** *Admission to R.N.-B.S.N. program.*

NSG 490. Special Studies

Credits 1.00 - 6.00 PeopleSoft Course ID 009713 Grading Basis GRD

Study of selected topics in nursing. No prerequisites.

NSG 497. Independent Study

Credits 1.00 - 3.00 PeopleSoft Course ID 008264 Grading Basis GRD

Independent study in nursing under faculty supervision. **Prerequisite(s):** *Permission of the department head.*

NSG 499A. Honors Thesis I

Credits 1.00 PeopleSoft Course ID 013392 Grading Basis GRD

NSG 499B. Honors Thesis II

Credits 2.00 - 3.00 PeopleSoft Course ID 013393 Grading Basis GRD

NSG 499C. Honors Thesis III

Credits 2.00 PeopleSoft Course ID 013394 Grading Basis GRD

Nutrition

NUTR 240. Basic Food Preparation Skills

Credits 2.00 PeopleSoft Course ID 013945 Grading Basis GRD

Students will become proficient in a conventional kitchen setting by learning and practicing basic culinary skills, cooking techniques and food safety. This course serves as a foundation for highly technical foods-related courses in the dietetics major. **Prerequisite(s):** *Dietetics major.*

NUTR 280. Nutrition for Wellness

Credits 3.00 PeopleSoft Course ID 004210 Grading Basis GRD

Students will study the impact of nutrition on wellness by learning nutrients, their functions in the human body, food sources and appropriate intake levels. Controversies surrounding use of various nutrients for improvement of health and well-being will be discussed.

NUTR 295. Foundations of Nutrition Practice

Credits 2.00 PeopleSoft Course ID 010654 Grading Basis GRD

An introduction to the profession of dietetics, credentialing processes in nutrition/dietetics, careers available in the field, and some basic skills needed for the profession.

NUTR 340. Science of Food Preparation

Credits 3.00 PeopleSoft Course ID 012318 Grading Basis GRD

This course explores the chemical composition of food, physical and chemical changes in food associated with household and industrial preparation techniques, definition of standard products, and appropriate assessment techniques for judging food quality. Laboratory component provides opportunity to judge foods prepared by different techniques. **Prerequisite(s):** *CHEM 131 or equivalent, admission to the dietetics program.*

NUTR 350. Emerging Research in Nutrition and Dietetics

Credits 3.00 PeopleSoft Course ID 014474 Grading Basis GRD

This evidence-based course exposes students to emerging topics related to nutrition and dietetics. Students will develop skills to critically evaluate and interpret current research presented in various formats (e.g., peer-reviewed journal articles, poster presentations, oral scientific presentations) and discuss implications for professional practice and advancement of the field.

Prerequisite(s): *Admission to the dietetics program*

NUTR 360. Management in Dietetics

Credits 3.00 PeopleSoft Course ID 010091 Grading Basis GRD

Application of management concepts, theories and principles to dietetics with a focus on the work environments (clinical and foodservice) in which registered dietitians must effectively practice. **Prerequisite(s):** *Admission to the Dietetics major*

NUTR 363. Quantity Food Production

Credits 4.00 PeopleSoft Course ID 002509 Grading Basis GRD

The principles of quantity food production and service are studied.

Prerequisite(s): *Admission to the dietetics major and NUTR 340.*

NUTR 380. Global Nutrition

Credits 3.00 PeopleSoft Course ID 002790 Grading Basis GRD

A study of food habits from around the world and their contributions to nutritional adequacy. Factors affecting global food-consumption behaviors including sociocultural practices, religion, health beliefs, agricultural practices, economics, politics and education will be explored.

NUTR 382. Sports Nutrition

Credits 3.00 PeopleSoft Course ID 001264 Grading Basis GRD

A study of the relationship of nutrition and athletic performance. Identification of the effects of age, sex, body build, environment, and state of health on energy needs and energy sources during physical activity. **Prerequisite(s):** *NUTR 280.*

NUTR 384. Clinical Nutrition I

Credits 3.00 PeopleSoft Course ID 005655 Grading Basis GRD

This course introduces nutrition as a disease therapy and the role of the clinical dietitian as a member of the health care team. Topics covered include nutrition screening and assessment, medical records documentation, basic dietary modifications, and patient/family counseling. **Prerequisite(s):** *Admission to the Dietetics Major and NUTR 340*

NUTR 385. Nutrition Throughout the Life Cycle

Credits 3.00 PeopleSoft Course ID 010034 Grading Basis GRD

A study of the nutritional needs throughout the life cycle and the development of food habits. Nutrition assessment and nutrition education from prenatal health through infancy, childhood, adolescence, adulthood and old age are emphasized. **Prerequisite(s):** *Admission to the Dietetics major*

NUTR 395. Introduction to Patient Care in Dietetics

Credits 2.00 PeopleSoft Course ID 001688 Grading Basis GRD

A study of the concepts of patient care in dietetics, skills needed for Medical Nutrition Therapy, and the dietitian's role on the health care team.

Prerequisite(s): *Dietetics Majors and NUTR 280.*

NUTR 446. Experimental Foods

Credits 3.00 PeopleSoft Course ID 002919 Grading Basis GRD

An introduction to research in foods. Different techniques of food preparation are studied and evaluated for most acceptable methods to obtain standard food products. **Prerequisite(s):** *Admission to the dietetics major, NUTR 340, organic chemistry and statistics.*

NUTR 455. Exercise and Nutrition in Chronic Disease

Cross listed with: *KIN 424*

Credits 3.00 PeopleSoft Course ID 000411 Grading Basis GRD

This interdisciplinary course examines the evidence-based relationship between exercise and diet patterns and behaviors, and major chronic diseases. Students will understand the epidemiology and pathogenesis of prevailing chronic diseases. Emphasis will be placed on developing exercise and dietary strategies to reduce the burden of chronic disease. **Prerequisite(s):** *BIO 270/BIO 270L and NUTR 280.*

NUTR 482. Nutrition and Metabolism

Credits 3.00 PeopleSoft Course ID 008776 Grading Basis GRD

This course is a study of the nutrients, their roles in intermediary metabolism, the effects of genetic errors in metabolism, nutritional deficiencies and means of assessing nutritional status. Agencies and programs concerned with nutrition and health and current trends in nutrition research are emphasized.

Prerequisite(s): *Admission to the dietetics major, BIO 290/ BIO 290L, and MATH 220. Corequisite(s): BIO 290.*

NUTR 484. Clinical Nutrition II

Credits 3.00 PeopleSoft Course ID 002223 Grading Basis GRD

A study of the use of diet in preventing illness and as a means of treating disease. Emphasis is given to patient education. **Prerequisite(s):** *Admission to the dietetics major, NUTR 384 and NUTR 482*

NUTR 485. Community Nutrition

Credits 3.00 PeopleSoft Course ID 009570 Grading Basis GRD

A study of human nutrition and health problems from a community perspective, programs and policies related to nutrition at local, state, and federal levels including preventive nutrition or wellness, and approaches and techniques for effective application and dissemination of nutrition knowledge in the community. **Prerequisite(s):** *Admission to dietetics major.*

NUTR 486. Counseling Skills for Dietetics

Credits 3.00 PeopleSoft Course ID 013946 Grading Basis GRD

This course will cover principles, theories and techniques of nutrition counseling for dietetics practice. **Prerequisite(s):** *Full admission to the Dietetics major, NUTR 384 and NUTR 385.*

NUTR 490. Field Experience in Dietetics

Credits 3.00 PeopleSoft Course ID 005480 Grading Basis GRD

Students participate in field experience relating to their major area of dietetics and their career goals under the coordination of a dietetics faculty member. On-the-job supervision will be provided by the participating hospital dietitians.

Prerequisite(s): *Admission to the dietetics major, NUTR 384 and NUTR 395.*

Application for enrollment must be completed through the course instructor in the fall semester prior to the summer in which it will be taken.

NUTR 495. Senior Seminar in Dietetics

Credits 3.00 PeopleSoft Course ID 010655 Grading Basis GRD

Dietetics students will conduct a senior research project. In addition, the Code of Ethics and Standards of Practice of the American Dietetics Association will be investigated, and students will prepare for their postgraduate dietetics internship. **Prerequisite(s):** *Admission to the Dietetics major*

NUTR 496. Special Studies in Nutrition/Dietetics

Credits 1.00 - 3.00 PeopleSoft Course ID 010656 Grading Basis GRD

This course is designed to give the student in dietetics an opportunity to complete independent study, professional conference participation, and/or research under faculty supervision. Prerequisite: Permission of the coordinator of the dietetics program. **Prerequisite(s):** *Permission of the coordinator of the dietetics program.*

NUTR 499A. Honors

Credits 1.00 PeopleSoft Course ID 009929 Grading Basis GRD

In this course students will propose their honors thesis research project.

NUTR 499B. Honors

Credits 3.00 PeopleSoft Course ID 013189 Grading Basis GRD

In this course students will complete a comprehensive review of literature and a formal plan for their honors thesis research project. They may also collect data if appropriate during this semester.

NUTR 499C. Honors

Credits 2.00 PeopleSoft Course ID 013190 Grading Basis GRD

In this course students will complete research for their honors thesis project, write results, discussion and conclusions sections of the paper, and submit the final paper to the research committee and the Honors Program.

Operations Management

OM 360. Operations Management

Credits 3.00 PeopleSoft Course ID 009391 Grading Basis GRD

An introduction to the operations function in business. Topics include facility design, job analysis and design, forecasting, production planning, quality management, inventory management, scheduling and project management.

Prerequisite(s): COB 191 or MATH 220, MATH 205 or MATH 235, and Non-Business Majors.

Persian

PERS 101. Elementary Persian I

Credits 3.00 - 4.00 PeopleSoft Course ID 012468 Grading Basis GRD

The fundamentals of Persian through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. Students will receive no credit for the course if he/she has had two or more years of the language in high school.

PERS 102. Elementary Persian II

Credits 3.00 - 4.00 PeopleSoft Course ID 012469 Grading Basis GRD

The fundamentals of Persian through a higher level of listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. If student has had two or more years of the language in high school he/she will not receive credit for the course. **Prerequisite(s):** PERS 101.

PERS 111. Intensive Persian I

Credits 6.00 PeopleSoft Course ID 013726 Grading Basis GRD

The fundamentals of Persian through listening, speaking, reading and writing. The 14-week course is the equivalent of PERS 101-102.

PERS 231. Intermediate Persian I

Credits 3.00 PeopleSoft Course ID 012470 Grading Basis GRD

A thorough review of first year grammar and vocabulary building. Conversation, composition and reading will be chosen to reach competency at the lower intermediate level. **Prerequisite(s):** PERS 102

PERS 232. Intermediate Persian II

Credits 3.00 PeopleSoft Course ID 012698 Grading Basis GRD

A thorough review of PERS 231 grammar and vocabulary building. Conversation, composition and reading will be chosen to reach competency at the advanced intermediate level. **Prerequisite(s):** PERS 231 or permission of instructor.

PERS 490. Special Studies in Persian

Credits 1.00 - 4.00 PeopleSoft Course ID 013050 Grading Basis GRD

Special topics or independent studies in Persian.

Philosophy

PHIL 101. Introduction to Philosophy [C2HQC]

Credits 3.00 PeopleSoft Course ID 002594 Grading Basis GRD

An introduction to the basic problems and concepts of philosophy – the nature of the self, ethics, theories of knowledge, philosophy of religion, etc., as revealed in the writings of the major philosophers. May be used for general education credit.

PHIL 101H. Introduction to Philosophy - Honors [C2HQC]

Credits 3.00 PeopleSoft Course ID 004961 Grading Basis GRD

An introduction to the basic problems and concepts of philosophy: the nature of man and the self, ethics, theories of knowledge, philosophy of religion, etc., as revealed in the writings of the major philosophers. May be used for general education credit. **Prerequisite(s):** Honors Students

PHIL 103. Introductory Topics in Philosophy

Credits 1.00-6.00 PeopleSoft Course ID 014240 Grading Basis NON

Course on various topics in philosophy and/or ethics. May be taken multiple times for credit.

PHIL 120. Critical Thinking [C1CT]

Credits 3.00 PeopleSoft Course ID 005019 Grading Basis GRD

An introduction to the techniques for analyzing and evaluating information in everyday experience. The functions of language will be discussed. Techniques for judging the strengths of arguments and the probable truth of the arguments' premises will be examined. This course does not meet the philosophy requirement for the B.A. degree. May be used for general education credit. May not be used for major credit.

PHIL 120H. Critical Thinking - Honors [C1CT]

Credits 3.00 PeopleSoft Course ID 002248 Grading Basis GRD

An introduction to the techniques for analyzing and evaluating information in everyday experience. The functions of language will be discussed. Techniques for judging the strengths of arguments and the probable truth of the arguments' premises will be examined. This course does not meet the philosophy requirement for the B.A. degree. May be used for general education credit. May not be used for major credit. **Prerequisite(s):** Honors Only & A:C1CT

PHIL 150. Ethical Reasoning [C1CT]

Cross listed with: PHIL 150H

Credits 3.00 PeopleSoft Course ID 012424 Grading Basis GRD

An introduction to the principles and techniques of rational decision making in ethics, including analysis of arguments and fallacies, ethical theories, and applications of moral principles to moral issues. This course cannot be used to fulfill the B.A. Philosophy requirement. May be used for general education credit. May not be used for major credit.

PHIL 150H. Ethical Reasoning

Cross listed with: PHIL 150

Credits 3.00 PeopleSoft Course ID 012424 Grading Basis GRD

An introduction to the principles and techniques of critical thinking in ethics, including analysis of arguments and fallacies, ethical theories, and applications of moral principles to moral issues. This course does not meet the philosophy requirement for the B.A. degree. May be used for general education credit. May not be used for major credit.

PHIL 200. Character and Virtue

Credits 3.00 PeopleSoft Course ID 013966 Grading Basis GRD

An examination of philosophical perspectives on the nature and importance of character and virtue.

PHIL 210. Philosophy Through Film

Credits 3.00 PeopleSoft Course ID 011781 Grading Basis GRD

This course combines feature length films and classic philosophical writings as points of departure for considering perennial philosophical questions such as:

What is real? (Metaphysics) How can I know? (Epistemology) What is of value? (Morality).

PHIL 218. Philosophy of Religion

Cross listed with: REL 218

Credits 3.00 PeopleSoft Course ID 009636 Grading Basis GRD

An intensive examination of religion from the standpoint of philosophical thinking with particular emphasis on the way philosophers view such problems as the existence of God, evil, immortality, religious language, etc.

PHIL 220. Philosophy and Science Fiction

Credits 3.00 PeopleSoft Course ID 014150 Grading Basis GRD

This course will explore the philosophical aspects of science fiction. Topics may include the nature of time, time travel, free will, consciousness, personal identity, possible worlds, artificial intelligence, quantum theory or philosophical skepticism.

PHIL 240. Greek Philosophy in Context

Credits 3.00 PeopleSoft Course ID 012423 Grading Basis GRD

This course will involve exploration of the intellectual world of the Ancient Greeks, with particular emphasis on the philosophical, historical, and literary works produced during the period. The course will include lectures and site visits throughout Greece.

PHIL 250. Introduction to Symbolic Logic

Credits 3.00 PeopleSoft Course ID 007116 Grading Basis GRD

An introduction to the languages and techniques of propositional logic and first-order quantification theory.

PHIL 262. Problems in Applied Ethics

Credits 3.00 PeopleSoft Course ID 003901 Grading Basis GRD

Ethical theories are used to analyze contemporary moral issues in areas such as business and health care. Course content varies.

PHIL 267. Philosophy of Law

Credits 3.00 PeopleSoft Course ID 011206 Grading Basis GRD

Examination of the philosophical issues raised by the law, including the nature, foundation, and limits of the law, theories of its interpretation, and the fundamental interests it aims to protect. **Prerequisite(s):** *Permission of instructor.*

PHIL 285. Philosophy, Art, and Literature

Credits 3.00 PeopleSoft Course ID 009647 Grading Basis GRD

This course will study artistic works (literary or otherwise) for their philosophical content. Related issues in the philosophy of art for example, the nature of tragedy, theories of interpretation may also be considered.

PHIL 300. Knowledge and Belief

Credits 3.00 PeopleSoft Course ID 005752 Grading Basis GRD

An extensive examination of theories of knowledge and philosophical problems concerning knowledge and belief. **Prerequisite(s):** *PHIL 101 or permission of the instructor.*

PHIL 305. Seminar in Aesthetics

Cross listed with: ART 305

Credits 3.00 PeopleSoft Course ID 008506 Grading Basis GRD

Readings and discussions in the persistent philosophical problems of the arts, centering on consideration of the work of art, the artist and the audience.

Prerequisite(s): *ART 200, ARTH 205, ARTH 206 or PHIL 101.*

PHIL 310. Symbolic Logic

Credits 3.00 PeopleSoft Course ID 007571 Grading Basis GRD

The study and application of the principles and techniques of modern deductive logic to natural language. Also, examination of the properties of formal systems

and of the logical implications and paradoxes of language. **Prerequisite(s):** *PHIL 250 or instructor consent.*

PHIL 311. Metaphysics

Credits 3.00 PeopleSoft Course ID 011216 Grading Basis GRD

Examination of central questions regarding the fundamental nature of reality. Possible topics: universals and particulars, possibility and necessity, identity of objects over time and puzzles of material constitution, the problem of free will and determinism, and the nature of time. **Prerequisite(s):** *At least one other philosophy course or approval of the instructor*

PHIL 315. Logic and Legal Reasoning

Credits 3.00 PeopleSoft Course ID 011072 Grading Basis GRD

Application of symbolic logic (first-order logic with identity) to legal language and deductive legal argument. Will include close logical analysis of at least one of the following: Supreme Court brief, Supreme Court decision, Supreme Court oral argument.

PHIL 320. Inductive Logic

Credits 3.00 PeopleSoft Course ID 010870 Grading Basis GRD

Introduction to inductive logic and the philosophical problems it raises. This course may include topics such as the traditional problem of induction; the Goodman paradox and the new riddle of induction; the probability calculus and kinds of probability; Mill's methods of experimental inquiry and the nature of causality, abduction (inference to the best explanation); and confirmation theory.

PHIL 323. Comparative Ethics East and West

Cross listed with: REL 323

Credits 3.00 PeopleSoft Course ID 013840 Grading Basis GRD

In an increasingly globalized world, ethical decisions often involve considering diverse systems of beliefs about how one ought to live. In this course, students will think about ethical questions from cross-cultural perspectives, including perspectives of Buddhism, Confucianism, Aristotelianism and utilitarianism. By analyzing arguments made in Eastern and Western philosophical and religious traditions, students will begin to see similarities—such as the use of logical reasoning and the undesirability of pain—as well as fundamental differences. Case studies and examinations of contemporary issues make the course content relevant to the present day.

PHIL 325. Philosophy of Mathematics

Credits 3.00 PeopleSoft Course ID 014151 Grading Basis GRD

This course is a general survey of topics in the philosophy of mathematics. Topics may include the realism/antirealism debate, structuralism in mathematics, mathematical explanation, mathematical conceptions of infinity, the limits of mathematics or philosophical implications of set theory.

PHIL 326. Introduction to Non-Standard Logics

Credits 3.00 PeopleSoft Course ID 013844

This course will examine some nonstandard logics and some of the philosophical issues they raise. Topics may include modal logic, intuitionistic logic, temporal logic or many valued logics.

PHIL 330. Moral Theory

Credits 3.00 PeopleSoft Course ID 008425 Grading Basis GRD

An examination, at the intermediate level, of both classical and contemporary moral theories. Critical analysis of the normative and meta-ethical issues these theories raise. **Prerequisite(s):** *PHIL 101 or permission of instructor.*

PHIL 335. The Individual, the State, and Justice

Credits 3.00 PeopleSoft Course ID 010871 Grading Basis GRD

Mid-level class in political philosophy. Will read classic and/or contemporary texts in philosophy influential on political thought. Focus may be on views of

the justification for, and role of, the state. Consideration may also be given to the proper relationship of individuals and the state, political freedom, and autonomy. **Prerequisite(s):** *PHIL 101 or permission of the instructor.*

PHIL 339. Islamic Philosophy

Cross listed with: *REL 339*

Credits 3.00 PeopleSoft Course ID 014618 Grading Basis GRD

This course will explore a variety of philosophical perspectives from across the Islamic world, employing methodological tools from both philosophy and religious studies. Themes may include: What is knowledge and how is it acquired? What does it mean to be human? What is the relationship between reason and other human faculties? What is the nature of time and history? What do we *really* mean when we talk about God? Philosophers covered may include: al-Kindī (d. 873), Ibn Sīnā (d. 1037), Ibn ‘Arabī (d. 1240), Mullā Ṣadrā (d. 1636), Muḥammad Iqbal (d. 1938) and Fatema Mernissi (d. 2015).

PHIL 340. Ancient Greek Philosophy

Credits 3.00 PeopleSoft Course ID 002854 Grading Basis GRD

This course traces philosophical problems raised by the pre-Socratics, Parmenides, Heraclitus, Pythagoras and the Sophists, through their treatment by Plato and Aristotle. Emphasis is placed on selected writings of Plato and Aristotle. **Prerequisite(s):** *One other PHIL class or permission of the instructor.*

PHIL 341. Modern Philosophy

Credits 3.00 PeopleSoft Course ID 001554 Grading Basis GRD

A selective survey of major issues and thinkers in Western philosophy from Descartes to Kant.

PHIL 342. Medieval Philosophy

Credits 3.00 PeopleSoft Course ID 011205 Grading Basis GRD

A survey of the major issues and thinkers of the medieval philosophical world with emphasis on the philosophical writings of those within the Western tradition, such as (e.g.) Augustine, Anselm, Aquinas, and Scotus.

Prerequisite(s): *One other philosophy course, or approval of the instructor.*

PHIL 343. Stoics, Skeptics and Epicureans

Credits 3.00 PeopleSoft Course ID 013899 Grading Basis GRD

This course will focus on philosophy from the Hellenistic and Roman periods (4th C. BCE through 5th C. CE), with a special emphasis on Epicureanism, Stoicism and Skepticism. **Prerequisite(s):** *One other PHIL course or permission of the instructor.*

PHIL 344. Existentialism

Credits 3.00 PeopleSoft Course ID 003648 Grading Basis GRD

An examination of existentialism and its major spokesmen including such authors as Kierkegaard, Nietzsche, Sartre, Camus, Marcel and Heidegger.

Prerequisite(s): *PHIL 101 or permission of the instructor.*

PHIL 350. The Philosophy of Feminism

Cross listed with: *WGSS 350*

Credits 3.00 PeopleSoft Course ID 012189 Grading Basis GRD

An intermediate-level examination of philosophical problems in feminist theory and feminist contributions to philosophy.

PHIL 370. American Philosophy

Credits 3.00 PeopleSoft Course ID 010135 Grading Basis GRD

A study of the main philosophical ideas in America, especially pragmatism, with particular emphasis being given to Pierce, James, Royce, Dewey and Whitehead. **Prerequisite(s):** *PHIL 101 or permission of the instructor.*

PHIL 375. Nineteenth Century Philosophy and Theology

Cross listed with: *REL 375*

Credits 3.00 PeopleSoft Course ID 002827 Grading Basis GRD

A selected study of 19th-century thought, with emphasis on controversies concerning the nature and limits of reason, the ultimate meaning of history, and the inner meaning and social significance of religion. Pertinent thinkers include Hegel, Marx, Schleiermacher, Kierkegaard, Nietzsche and others.

PHIL 376. Nietzsche

Credits 3.00 PeopleSoft Course ID 013781 Grading Basis GRD

An examination of Nietzsche's philosophy based on close study of one or more of his major works. The course may also more briefly examine one or more thinkers who especially influenced Nietzsche (for example Schopenhauer) or who were strongly influenced by him (for example Foucault). **Prerequisite(s):** *PHIL 101 or permission of the instructor.*

PHIL 377. Hermeneutics

Cross listed with: *REL 377*

Credits 3.00 PeopleSoft Course ID 012384 Grading Basis GRD

This course will examine the main features of hermeneutics with particular emphasis on its contemporary perspectives. Discussion will focus on such themes as human understanding and human finitude, the nature of history and tradition, linguisticity and textuality of experience. Readings may address Gadamer, Ricoeur, Schleiermacher, and Dilthey. **Prerequisite(s):** *PHIL 101 or permission of the instructor.*

PHIL 380. Philosophy of Language

Credits 3.00 PeopleSoft Course ID 000162 Grading Basis GRD

An examination of the central issues in contemporary (mainly 20th Century) philosophy of language. Potential topics to be covered include meaning, reference, the nature of language, and the nature of truth. Potential philosophers to be examined include Mill, Frege, Russell, Kripke, Lewis and Grice. **Prerequisite(s):** *PHIL 250 and one other course in philosophy course or permission of the instructor.*

PHIL 390. Special Topics in Philosophy

Credits 3.00 PeopleSoft Course ID 011494 Grading Basis GRD

Topics for this intermediate-level course may be drawn from any area or period of philosophy chosen by the instructor. The course is designed primarily for philosophy majors and minors, but any suitably prepared student may take the course with permission of the instructor. **Prerequisite(s):** *One other PHIL course or permission of the instructor.*

PHIL 391. Advanced Special Topics in Philosophy

Credits 3.00 PeopleSoft Course ID 012676 Grading Basis GRD

Topics for this advanced course may be drawn from any area or period of philosophy chosen by the instructor. The course is designed primarily for philosophy majors and minors, but any suitably prepared student may take the course with the permission of the instructor. May be repeated for credit.

Prerequisite(s): *Six hours of philosophy or consent of the instructor.*

PHIL 392. Philosophy of Mind

Credits 3.00 PeopleSoft Course ID 010872 Grading Basis GRD

An examination of competing theories of the intrinsic nature of mental states and mental processes, including careful consideration of questions concerning the relation between the mind and the physical world. **Prerequisite(s):** *PHIL 101 or approval of the instructor*

PHIL 394. Self and Identity

Credits 3.00 PeopleSoft Course ID 012568 Grading Basis GRD

This course will explore the philosophical aspects of personal identity, with particular emphasis on the metaphysics of the self. Other issues considered may include the nature of the soul, the status of self-knowledge and the ethical aspects of personhood. **Prerequisite(s):** *One other PHIL course or permission of the instructor.*

PHIL 396. Philosophy of Physics**Credits 3.00 PeopleSoft Course ID 013120 Grading Basis GRD**

This course examines the philosophical foundations of physics. Some of the philosophical issues explored in the course may include how various theories in physics impact metaphysics, ontology and/or epistemology. Topics may include the nature of space and time, special relativity, general relativity, quantum theory, classical mechanics, thermodynamics, and/or cosmology.

PHIL 397. Philosophy of Space and Time**Credits 3.00 PeopleSoft Course ID 013073 Grading Basis GRD**

This course will survey debates about the nature of space and time. Topics may include Zeno's paradoxes, time travel, relationism vs. substantivalism, classical accounts of space and time, and relativistic space time.

PHIL 398. Philosophy of Quantum Theory**Credits 3.00 PeopleSoft Course ID 013074 Grading Basis GRD**

Quantum theory describes atoms and particles and is one of the most empirically successful physical theories. However, quantum theory seems to have revolutionary conceptual implications for metaphysics and epistemology. This course offers an introduction to philosophical problems raised by quantum theory. Topics may include the measurement problem, quantum entanglement, different interpretations of quantum mechanics, the Einstein-Podolsky-Rosen (EPR) paradox, and Bell's theorem.

PHIL 410. Philosophy of Science**Credits 3.00 PeopleSoft Course ID 001827 Grading Basis GRD**

This course surveys a number of topics about the nature of science. The topics may include the problem of distinguishing science from pseudoscience, the nature of scientific explanation, the notion of progress in science, and the realism and anti-realism debate.

PHIL 430. Analytic Philosophy**Credits 3.00 PeopleSoft Course ID 007566 Grading Basis GRD**

An examination of the origins and development of contemporary philosophical analysis, with special attention given to the nature and uses of language as well as logical structures of confirmation and explanation. **Prerequisite(s):** PHIL 101, PHIL 250 or permission of the instructor.

PHIL 440. Advanced Moral Philosophy**Credits 3.00 PeopleSoft Course ID 010873 Grading Basis GRD**

A critical examination, at the advanced level, of recent or historical work on normative and/or metaethical issues in moral philosophy. **Prerequisite(s):** PHIL 101, PHIL 330 or permission of the instructor.

PHIL 460. Topics in Classical Philosophy**Credits 3.00 PeopleSoft Course ID 010874 Grading Basis GRD**

An advanced study of major issues in or the writings of one, or more thinkers in ancient Greece through the western medieval period. **Prerequisite(s):** PHIL 340 and Junior Standing or permission of instructor. May be repeated for credit with change of topics.

PHIL 466. Kant**Credits 3.00 PeopleSoft Course ID 012376 Grading Basis GRD**

An examination of the theory of knowledge and the critique of traditional metaphysics set forth in Kant's Critique of Pure Reason, and of the ethical theory and the moral metaphysics defended in his Groundwork to the Metaphysics of Morals and Critique of Practical Reason. The course may also more briefly explore some related topics, such as Kant's views on aesthetics and teleology, or the key ideas of important post-Kantian philosophers like Fichte, Schelling or Hegel. **Prerequisite(s):** PHIL 101 or permission of the instructor.

PHIL 468. Phenomenology**Credits 3.00 PeopleSoft Course ID 012377 Grading Basis GRD**

A study of phenomenological investigation into the fundamental structures and conditions of conscious experience -- meaning-laden, first person experience of objects, of events, of one's self, of other persons, of one's world, and so forth. The course will devote special attention to the work of Husserl and of Heidegger. Additional authors may be studied, such as Sartre, Merleau-Ponty or Levinas. **Prerequisite(s):** PHIL 101 or permission of the instructor.

PHIL 490. Special Topics in Philosophy**Credits 3.00 PeopleSoft Course ID 003626 Grading Basis GRD**

Designed to give capable students an opportunity to complete independent study in philosophy under faculty supervision. May be repeated for credit.

PHIL 495. Philosophy Course Assistantship**Credits 1.00 - 6.00 PeopleSoft Course ID 012299 Grading Basis GRD**

Students participate as course assistants in philosophy. Assistantships provide students with a sense of what it is like to teach a philosophy course by allowing them to work closely with faculty members through different phases of course preparation, presentation and evaluation. Assistantships may also provide opportunities for student assistants to lead discussion and to help their peers review the material outside of the classroom. **Prerequisite(s):** May be repeated once if assisting a different course, with six maximum total credit hours for both courses combined. Only three credit hours can apply to major or minor.

PHIL 499A. Honors Thesis**Credits 1.00 PeopleSoft Course ID 006090 Grading Basis GRD****PHIL 499B. Honors Thesis****Credits 3.00 PeopleSoft Course ID 001987 Grading Basis GRD****PHIL 499C. Honors Thesis Prep****Credits 2.00 PeopleSoft Course ID 001058 Grading Basis GRD**

Physics

PHYS 105. Foundations of Physics**Credits 1.00 PeopleSoft Course ID 011183 Grading Basis GRD**

This course introduces beginning physics majors to the study of physics in the department of Physics and Astronomy. Students become acquainted with current research topics in physics and astronomy. The course includes an overview of library methods and programming skills used during physics course work. Students engage in dialogues regarding diversity, equity and inclusion within the physics community and the evolving relationship between physicists and society.

PHYS 121. The Physical Nature of Light and Sound (3, 1) [C3PP]**Credits 4.00 PeopleSoft Course ID 010577 Grading Basis GRD**

A study of the physical properties of light and sound waves. Topics include production, propagation and spectral analysis of waves. Applications to be covered include musical instruments, sound reproduction, room acoustics, optical instruments (cameras, projectors, lasers), and color in art and nature. The course will include outside-of-class experiential activities. May be used for general education credit.

PHYS 140. College Physics I [C3PP]**Credits 3.00 PeopleSoft Course ID 006806 Grading Basis GRD**

The first semester of a non-calculus sequence in general physics. Topics include principles of mechanics, thermal properties of matter, wave motion and sound. A working knowledge of algebra and trigonometry is required. May be used for general education credit.

PHYS 140L. General Physics Laboratory [C3L]**Credits 1.00 PeopleSoft Course ID 007578 Grading Basis GRD**

These laboratory courses are designed to complement and supplement the PHYS 140-150 and PHYS 240-250 lecture courses. PHYS 140L may be used

for general education credit. **Prerequisite(s):** *PHYS 140 or PHYS 240.*

Corequisite(s): *For PHYS 140L: PHYS 140 or PHYS 240.*

PHYS 150. College Physics II

Credits 3.00 PeopleSoft Course ID 003459 Grading Basis GRD

The second semester of a non-calculus sequence in general physics. Topics include electric charges, circuits, magnetism, optics, atomic and nuclear physics. **Prerequisite(s):** *PHYS 140 (Must attain a grade of C- or higher).*

PHYS 150H. College Physics II – Honors

Credits 3.00 PeopleSoft Course ID 013784 Grading Basis GRD

The second semester of a non-calculus sequence in general physics. Topics include electric charges, circuits, magnetism, optics, atomic and nuclear physics. **Prerequisite(s):** *PHYS 140 (Must attain a grade of C- or higher).*

PHYS 150L. General Physics Laboratory

Credits 1.00 PeopleSoft Course ID 002828 Grading Basis GRD

These laboratory courses are designed to complement and supplement the PHYS 140-150 lecture courses. **Prerequisite(s):** *PHYS 140L and either PHYS 140 or PHYS 150.* **Corequisite(s):** *PHYS 150.*

PHYS 215. Energy and the Environment [C3PP]

Cross listed with: *PHYS 215H*

Credits 3.00 PeopleSoft Course ID 004849 Grading Basis GRD

Energy use, sources and trends; fossil fuels, heat-work conversions, thermodynamic restrictions and electric power production; nuclear fission reactors and fusion energy; solar energy and technologies; alternative energy sources; energy storage; energy conservation; issues of waste and safety. Environmental, social and economic aspects will be discussed. Not open to ISAT majors scheduled to take ISAT 211 as part of their degree requirements. May be used for general education credit. **Prerequisite(s):** *One college course in science and one in mathematics.*

PHYS 215H. Energy and the Environment [C3PP]

Cross listed with: *PHYS 215*

Credits 3.00 PeopleSoft Course ID 004849 Grading Basis GRD

Energy use, sources and trends; fossil fuels, heat-work conversions, thermodynamic restrictions and electric power production; nuclear fission reactors and fusion energy; solar energy and technologies; alternative energy sources; energy storage; energy conservation; issues of waste and safety. Environmental, social and economic aspects will be discussed. Not open to ISAT majors scheduled to take ISAT 212 as part of their degree requirements. May be used for general education credit.

PHYS 240. University Physics I [C3PP]

Credits 3.00 PeopleSoft Course ID 005436 Grading Basis GRD

Kinematics, dynamics, energy and momentum conservation, oscillatory motion, fluid mechanics and waves. May be used for general education credit.

Corequisite(s): *MATH 232 or MATH 235.*

PHYS 240L. University Physics Laboratory I [C3L]

Credits 1.00 PeopleSoft Course ID 001059 Grading Basis GRD

This laboratory course is designed to complement and supplement the PHYS 240 lecture courses. PHYS 240L may be used for general education credit.

Prerequisite(s): *PHYS 240.* **Corequisite(s):** *PHYS 240.*

PHYS 246. Data Acquisition and Analysis Techniques I

Credits 1.00 PeopleSoft Course ID 012689 Grading Basis GRD

This laboratory supplements the PHYS 240 lecture course by establishing the experimental basis of physics. Topics include conception, design and performance of experiments in physics emphasizing data acquisition, analysis of experimental data, and the handling of experimental uncertainties.

Prerequisite(s): *PHYS 240.*

PHYS 247. Data Acquisition and Analysis Techniques II

Credits 1.00 PeopleSoft Course ID 012746 Grading Basis GRD

This intermediate laboratory course is designed to prepare students for the advanced laboratory sequence and undergraduate research in physics or astronomy. The course emphasizes the conceptualization, design and execution of experiments in physics. Students will develop skills in the techniques of acquiring and analyzing data, performing error analysis, drawing conclusions from experiments, and presenting results in both written and oral form. **Prerequisite(s):** *PHYS 150L or PHYS 250L.*

PHYS 250. University Physics II

Credits 3.00 PeopleSoft Course ID 005087 Grading Basis GRD

Electric forces, fields and potentials; capacitance, dielectrics, resistance and DC circuits; magnetic fields, induced electric fields, inductance and AC circuits; geometrical optics, interference, diffraction and polarization. **Prerequisite(s):** *PHYS 240 with a grade of "C-" or higher is the prerequisite.* **Corequisite(s):** *MATH 236.*

PHYS 250L. University Physics Laboratory II

Credits 1.00 PeopleSoft Course ID 005207 Grading Basis GRD

This laboratory course is designed to complement and supplement the PHYS 250. University Physics II lecture courses. **Prerequisite(s):** *PHYS 240L, PHYS 240, PHYS 250.* **Corequisite(s):** *PHYS 250.*

PHYS 260. University Physics III

Credits 3.00 PeopleSoft Course ID 004781 Grading Basis GRD

The course will cover oscillations and wave dynamics, special relativity, and rotational kinematics and dynamics. **Prerequisite(s):** *"C" or better in PHYS 150 or PHYS 250.* **Corequisite(s):** *MATH 237.*

PHYS 270. Modern Physics

Credits 3.00 PeopleSoft Course ID 007913 Grading Basis GRD

A course in modern physics, consisting of a discussion of the experimental basis for and fundamental principles of quantum physics, with applications to atomic structure and nuclear physics. **Prerequisite(s):** *"C" or better in PHYS 150 or PHYS 250, or consent of the instructor.* **Corequisite(s):** *MATH 237 and PHYS 270L.*

PHYS 270L. Modern Physics Laboratory

Credits 1.00 PeopleSoft Course ID 014321 Grading Basis GRD

This lab course introduces students to the experiments that revolutionized the field of physics around the turn of the 20th century. Topics include the properties of electrons, atoms, molecules and photons and their interactions. Students will utilize advanced data taking and analysis techniques and expand their programming skills. **Corequisite(s):** *PHYS 270.*

PHYS 295. Laboratory Apparatus Design and Construction

Credits 1.00 PeopleSoft Course ID 004688 Grading Basis GRD

An introduction to the design and fabrication of laboratory apparatus using machine tools. **Prerequisite(s):** *PHYS 250 or permission of the instructor*

PHYS 297. Topics in Physics

Credits 1.00 - 4.00 PeopleSoft Course ID 001177 Grading Basis GRD

Topics in physics at the second-year level. May be repeated for credit when course content changes. Topics selected may dictate prerequisites. Students should consult instructor prior to enrolling for course. **Prerequisite(s):** *Permission of the instructor.*

PHYS 302. Science Pedagogy

Cross listed with: *MSSE 397.*

Credits 2.00 PeopleSoft Course ID 014133 Grading Basis GRD

An introduction to the science of learning and how it informs teaching and learning in laboratory and field-based natural sciences. Special emphasis is

given to conceptual change, metacognition and effective teaching strategies based on learning science, science discourse and argumentation, and safety.

PHYS 326. Biophysics

Credits 3.00 PeopleSoft Course ID 013057 Grading Basis GRD

Physical models are used to explain biological systems. Topics from biology include cell division, replication, transcription, and translation of DNA, protein folding, and molecular motors. Physics topics include entropy and free energy, diffusion, statistical mechanics of two state systems. Experimental tools for biophysics are also discussed. **Prerequisite(s):** *PHYS 150 or PHYS 250.*

PHYS 330. Relativity

Cross listed with: *ASTR 330*

Credits 4.00 PeopleSoft Course ID 013852

The basic mathematical descriptions of both Einstein's special and general theories of relativity are introduced through specific physical cases and calculus-based lectures. Special relativity is explored through its physical consequences on a variety of phenomena. General relativity is studied by considering the effects of gravity on space-time curvature on astrophysical objects. Simple numerical experiments in both special and general relativity will be conducted as class projects. **Prerequisite(s):** *PHYS 260 and MATH 237, or permission of instructor.*

PHYS 333. Introduction to Particle Physics

Credits 3.00 PeopleSoft Course ID 013323 Grading Basis GRD

This is an introduction to current themes and ideas which confront the fundamental nature of matter and interactions. The most widely accepted theory, the Standard Model, will be explored. Possible extension, beyond the Standard Model physics, will be discussed. Basic properties such as charge, mass, and lepton number will be examined within these frameworks. Experiments that illuminate the basic nature of matter and ideas such as symmetry and quantum physics will be reviewed and assessed. **Prerequisite(s):** *PHYS 270/PHYS 270L.*

PHYS 337. Solid State Physics

Credits 3.00 PeopleSoft Course ID 001259 Grading Basis GRD

A study of the forces between atoms, crystal structure, lattice vibrations and thermal properties of solids, free electron theory of metals, band theory of solids, semiconductors and dielectrics. **Prerequisite(s):** *PHYS 270/PHYS 270L.*

PHYS 338. Nuclear Physics

Credits 3.00 PeopleSoft Course ID 009296 Grading Basis GRD

An introduction to the study of the atomic nucleus. Topics covered include static nuclear properties and movements, the force between nucleons, the deuteron, nucleon scattering, isospin, nuclear structure, radioactivity, decay kinematics and selection rules, fission, and fusion. **Prerequisite(s):** *PHYS 270/PHYS 270L.*

PHYS 339. Introductory Nuclear Science

Credits 4.00 PeopleSoft Course ID 013411 Grading Basis GRD

An introduction to nuclear science that will provide a solid foundation for experimental work in applied nuclear physics. Detection of ionizing radiation, as it applies to nuclear physics, will be additionally covered in the laboratory-component of the course. Topics include concepts of radioactive decays, radiation transport and interaction with matter, basics of radiation detection devices, dosimetry, radiation therapy, X-ray production, and fission nuclear reactors. **Prerequisite(s):** *PHYS 270/PHYS 270L or consent of instructor.*

PHYS 340. Mechanics

Credits 3.00 PeopleSoft Course ID 003511 Grading Basis GRD

Application of the fundamental laws of mechanics to particles and rigid bodies. Topics include statics, dynamics, central forces, oscillatory motion and

generalized coordinates. **Prerequisite(s):** *PHYS 260 and either MATH 238 or MATH 300 or MATH 336. Corequisite(s):* *PHYS 260 and either MATH 238 or MATH 300 or MATH 336.*

PHYS 341. Non-Linear Dynamics and Chaos

Cross listed with: *MATH 341*

Credits 3.00 PeopleSoft Course ID 001623 Grading Basis GRD

Introductory study of nonlinear dynamics and chaos intended primarily for upper-level undergraduates in science or mathematics. Topics include stability, bifurcations, phase portraits, strange attractors, fractals, and selected applications of nonlinear dynamics in pure and applied science. Computers may be utilized for simulations and graphics. **Prerequisite(s):** *MATH 238 or (MATH 300 and MATH 336); and MATH 248 or CS 149.*

PHYS 342. Mechanics II

Credits 3.00 PeopleSoft Course ID 008060 Grading Basis GRD

A continuation of PHYS 340 including Lagrangian dynamics, rigid body motion and the theory of small oscillations. **Prerequisite(s):** *PHYS 340*

PHYS 344. Advanced Physics Laboratory I

Credits 1.00 PeopleSoft Course ID 012680 Grading Basis GRD

The first course in a three-course laboratory sequence. A set of advanced laboratory experiences in which students are introduced to experimentation in several areas of physics while gaining experience in experiment design, data analysis, formal report writing and presentations **Prerequisite(s):** *PHYS 247. Corequisite(s):* *PHYS 345.*

PHYS 345. Advanced Physics Laboratory II

Credits 1.00 PeopleSoft Course ID 012681 Grading Basis GRD

This is the second course in a three-course laboratory sequence. A set of advanced laboratory experiences in which students are introduced to experimentation in several areas of physics while gaining experience in experiment design, data analysis, formal report writing and presentations. **Prerequisite(s):** *PHYS 344. Corequisite(s):* *PHYS 344.*

PHYS 346. Advanced Physics Laboratory III

Credits 1.00 PeopleSoft Course ID 012992 Grading Basis GRD

This is the third course in a three-course laboratory sequence. A set of advanced laboratory experiences in which students are introduced to experimentation in several areas of physics while gaining experience in experiment design, data analysis, formal report writing and presentations. **Prerequisite(s):** *PHYS 344 and PHYS 345.*

PHYS 350. Electricity and Magnetism

Credits 3.00 PeopleSoft Course ID 001887 Grading Basis GRD

A study of the electrostatic field, the magnetic field, direct and alternating currents, and electromagnetic waves. **Prerequisite(s):** *PHYS 250 and MATH 237.*

PHYS 360. Analog Electronics

Credits 4.00 PeopleSoft Course ID 010201 Grading Basis GRD

DC and AC circuits, spectral and pulse circuit response, semiconductor physics, and simple amplifier and oscillator circuits. **Prerequisite(s):** *PHYS 250 or permission of the instructor.*

PHYS 364. Introduction to Fluid Mechanics

Cross listed with: *MATH 364*

Credits 4.00 PeopleSoft Course ID 003896 Grading Basis GRD

Introduces the student to the application of vector calculus to the description of fluids. The Euler equation, viscosity and the Navier-Stokes equation will be covered. **Prerequisite(s):** *MATH 237 and PHYS 260. Corequisite(s):* *PHYS 260 and MATH 237, or permission of the instructor.*

PHYS 367. Introduction to Acoustics

Cross listed with: MATH 367

Credits 3.00 PeopleSoft Course ID 011520 Grading Basis GRD

This course represents an introduction to sound, hearing, and vibration.

Architectural, biological and environmental acoustics will also be discussed.

Students will develop an ability to use mathematical models and experimental techniques to study problems in acoustics and to transfer this knowledge to analogous situations. They will also develop an ability to conduct a semester-long research or expository project and present it in written and oral form to an audience of peers. **Prerequisite(s):** MATH 236.

PHYS 371. Digital Electronics

Credits 2.00 PeopleSoft Course ID 010199 Grading Basis GRD

Transistors, integrated circuits, logic families, gates, latches, decoders,

multiplexers, multivibrators, counters and displays. **Prerequisite(s):** PHYS 150 or PHYS 250 with a grade of "C" or better or permission of the instructor.

PHYS 372. Microcontrollers and Their Applications (2, 4)

Credits 2.00 PeopleSoft Course ID 003678 Grading Basis GRD

Microcontrollers, their instructions, architecture and applications.

Prerequisite(s): PHYS 371 or permission of the instructor

PHYS 375. An Introduction to Materials Science

Cross listed with: CHEM 375, MATS 375

Credits 3.00 PeopleSoft Course ID 007865 Grading Basis GRD

An introduction to materials science with emphasis on general properties of materials. Topics will include crystal structure, extended and point defects, and mechanical, electrical, thermal and magnetic properties of metals, ceramics, electronic materials, composites and organic materials. **Prerequisite(s):** CHEM 131, PHYS 150 or PHYS 250, ISAT 212 or permission of the instructor.

PHYS 380. Thermodynamics and Statistical Mechanics

Credits 3.00 PeopleSoft Course ID 001119 Grading Basis GRD

A treatment of the thermal properties of matter from both macroscopic and microscopic viewpoints. Topics include the laws of thermodynamics, heat, work, internal energy, entropy, elementary statistical concepts, ensembles, classical and quantum statistics and kinetic theory. Approximately equal attention will be given to thermodynamics and statistical mechanics.

Prerequisite(s): PHYS 270/PHYS 270L.

PHYS 381. Materials Characterization (Lecture/Lab)

Credits 3.00 PeopleSoft Course ID 009189 Grading Basis GRD

A review of the common analytical techniques used in materials science related industries today, including the evaluation of electrical, optical, structural and mechanical properties. Typical techniques may include Hall Effect, scanning probe microscopy, scanning electron microscopy, ellipsometry and x-ray diffraction. **Prerequisite(s):** CHEM 375 /PHYS 375/MATS 375 or ISAT 431.

PHYS 386. Robots: Structure and Theory

Credits 3.00 PeopleSoft Course ID 013694 Grading Basis GRD

An introduction to the study of autonomous robotic platforms. Topics include robot structure, propulsion systems, robot kinematics, sensors used in robotics, and sensor integration. The course combines lectures with laboratory activities in which students will get hands-on experience in designing, building, programming, and testing autonomous robotic platforms. **Prerequisite(s):** Completion of the basic preparation courses required for the robotics minor or permission of the instructor.

PHYS 387. Theory and Basic Principles of Mobile Robot Construction and Control

Credits 3.00 PeopleSoft Course ID 013837

The course is designed to familiarize the student with the basic elements of mobile robots. The course will provide students the opportunity to work with

engineers and experts in the field of robotics to build a mobile robot while addressing the issues of control and principles of operation. The course will take advantage of the 4VA telepresence system to bring together experts and students from outside locations to supplement local instruction. **Prerequisite(s):** Completion of the basic preparation courses required for the robotics minor or permission of the instructor.

PHYS 388. Robots for Humanity

Credits 3.00 PeopleSoft Course ID 013890 Grading Basis GRD

Interdisciplinary team based course in which real world problems will be analyzed and tackled using robotics. May be repeated for credit when course content changes. **Prerequisite(s):** PHYS 387 or completion of the basic preparation courses required for the robotics minor or permission of the instructor.

PHYS 390. Computer Applications in Physics

Credits 3.00 PeopleSoft Course ID 009524 Grading Basis GRD

Applications of automatic computation in the study of various physical systems. Problems are taken from mechanics of particles and continua, electromagnetism, optics, quantum physics, thermodynamics and transport physics. **Prerequisite(s):** MATH 248 or CS 149, PHYS 240, PHYS 250 and six additional credit hours in major courses in physics, excluding PHYS 360, PHYS 371 and PHYS 372.

PHYS 391. Seminar

Credits 0.00 - 1.00 PeopleSoft Course ID 010176 Grading Basis GRD

Participation in the department seminar program. **Prerequisite(s):** Junior or Senior Standing and permission of the instructor.

PHYS 392. Seminar

Credits 1.00 PeopleSoft Course ID 010184 Grading Basis GRD

Participation in the department seminar program. **Prerequisite(s):** Junior or Senior Standing and permission of the instructor.

PHYS 397. Topics in Physics

Credits 1.00 - 4.00 PeopleSoft Course ID 006602 Grading Basis GRD

Topics in physics at intermediate level. May be repeated for credit when course content changes. Topics selected may dictate prerequisites. Students should consult instructor prior to enrolling for course. **Prerequisite(s):** Permission of the instructor.

PHYS 398. Independent Study in Physics or Astronomy

Cross listed with: ASTR 398

Credits 1.00 - 3.00 PeopleSoft Course ID 000903 Grading Basis GRD

Repeatable to 4 credits.

An individual project related to some aspect of physics or astronomy. Must be under the guidance of a faculty adviser. A student may not earn more than a total of 4 credits for PHYS/ATSR 398

PHYS 398A. Problems in Physics

Credits 1.00 PeopleSoft Course ID 001067 Grading Basis GRD

An individual project related to some aspect of physics. Must be under the guidance of a faculty adviser.

PHYS 398B. Problems in Physics

Credits 2.00 PeopleSoft Course ID 005859 Grading Basis GRD

An individual project related to some aspect of physics. Must be under the guidance of a faculty adviser.

PHYS 420. Modern Optics

Credits 3.00 PeopleSoft Course ID 006543 Grading Basis GRD

A study of the kinematic properties and physical nature of light including reflection, refraction, interference, diffraction, polarization, coherence and

holography. **Prerequisite(s):** *PHYS 260, PHYS 270/PHYS 270L, and MATH 237.*

PHYS 440. Geophysics (3, 2)

Cross listed with: *GEOL 440*

Credits 4.00 PeopleSoft Course ID 007240 Grading Basis GRD

A survey of geophysical methods, with joint attention on near-surface and solid earth applications. Topics include seismology, heat flow, gravity, magnetism, electrical methods, ground penetrating radar and geophysical aspects of plate tectonics. Labs focus on practical experience with data acquisition, reduction, and interpretation and are a combination of field, classroom and computational activities. **Prerequisite(s):** *GEOL 110L or GEOL 115L, or PHYS 140 and PHYS 150, or PHYS 240 and PHYS 250; or permission of the instructor.*

PHYS 455. Lasers and Their Applications to Physical Sciences

Cross listed with: *CHEM 455*

Credits 3.00 PeopleSoft Course ID 002624 Grading Basis GRD

An introduction to both the theoretical and practical aspects of lasers and their applications in the physical sciences. **Prerequisite(s):** *PHYS 270/PHYS 270L, CHEM 331, or permission of the instructor.*

PHYS 460. Quantum Mechanics

Credits 3.00 PeopleSoft Course ID 006083 Grading Basis GRD

Principles and applications of quantum mechanics. Topics include wave packets and the uncertainty principle, the Schrodinger equation, one-dimensional potentials, operators and eigenvectors, three-dimensional motion and angular momentum, and the hydrogen atom. **Prerequisite(s):** *PHYS 340.*

PHYS 482. Advanced Theoretical Physics

Credits 3.00 PeopleSoft Course ID 013853

This course is a continuation of topics from mechanics, thermodynamics and statistical Mechanics, electricity and magnetism, and quantum mechanics. The course may include topics from mechanics (Lagrangian dynamics, rigid body motion), electricity and magnetism (solution of Maxwell's equations in the presence of matter), thermodynamics and statistical mechanics (dynamical statistical mechanics) and quantum mechanics (beyond the hydrogen atom).

Prerequisite(s): *PHYS 340 and PHYS 350; or PHYS 460; or permission of instructor.*

PHYS 485. Science of the Small

Cross listed with: *CHEM 485*

Credits 4.00 PeopleSoft Course ID 013693 Grading Basis GRD

The chemistry and physics of materials of the nanometer scale will be explored. Lectures and laboratories will cover contemporary issues in surfaces, self-assembly and low dimensional materials. The intersection of biology, chemistry, engineering and physics will be explored through nanoscience.

Prerequisite(s): *CHEM 132 and MATH 236. Prerequisite or corequisite: PHYS 150 or PHYS 250.*

PHYS 491. Seminar

Credits 0.00 - 1.00 PeopleSoft Course ID 000506 Grading Basis GRD

Principal course activities are participation in the departmental assessment program and attendance at departmental seminars. **Prerequisite(s):** *PHYS 392.*

PHYS 492. Seminar

Credits 1.00 PeopleSoft Course ID 002913 Grading Basis GRD

Principal course activities are participation in the departmental assessment program and attendance at departmental seminars. **Prerequisite(s):** *PHYS 392 is the prerequisite.*

PHYS 497. Topics in Physics

Credits 1.00 - 4.00 PeopleSoft Course ID 002457 Grading Basis GRD

Topics in physics at the advanced level. May be repeated for credit when course content changes. Topics selected may determine prerequisites.

Students should consult instructor prior to enrolling for course. **Prerequisite(s):** *Permission of the instructor.*

PHYS 498. Undergrad Phys Research

Credits 1.00 - 4.00 PeopleSoft Course ID 004795 Grading Basis GRD

Research in a selected area of physics as arranged with a faculty research adviser. A student may not earn more than a total of six credits for PHYS/ATSR 498R. Repeatable up to six credits. **Prerequisite(s):** *Proposal for study must be approved prior to registration.*

PHYS 498A. Undergrad Phys Research

Credits 2.00 PeopleSoft Course ID 003386 Grading Basis GRD

Research in a selected area of physics as arranged with a faculty research adviser. **Prerequisite(s):** *Proposal for study must be approved prior to registration.*

PHYS 498R. Undergraduate Research in Physics or Astronomy

Cross listed with: *ASTR 498R*

Credits 1.00 - 4.00 PeopleSoft Course ID 008330 Grading Basis GRD

Repeatable to 6 credits.

Research in a selected area of physics or astronomy as arranged with a faculty research adviser. As student may not earn more than 6 credits for PHYS 498R and ASTR 498R. **Prerequisite(s):** *Proposal for study must be approved prior to registration.*

PHYS 499. Honors

Credits 1.00 - 3.00 PeopleSoft Course ID 010098 Grading Basis GRD

Repeatable.

Participation in this course must be approved during the second semester of the junior year. For details, see catalog section entitled "Graduation with Distinction."

Political Science

POSC 200. Global Politics [C4GE]

Credits 3.00 PeopleSoft Course ID 001040 Grading Basis GRD

An exploration of political, social and economic issues and structures existing within and between states in the contemporary global community. Students are introduced to alternative approaches to analyzing these issues in diverse cultures and political settings. May be used for general education credit.

POSC 201. Introduction to Western Political Theory

Credits 3.00 PeopleSoft Course ID 004879 Grading Basis GRD

A general survey of Western political theory from Plato to Marx, including the foundations of political inquiry and the search for order and freedom.

POSC 225. U.S. Government [C4AE]

Credits 4.00 PeopleSoft Course ID 005466 Grading Basis GRD

An examination of institutions, processes and intellectual concepts which structure American political activity. The interaction of the political system with the changing American society and America's changing role in world affairs are also treated. The course provides an introduction to quantitative methodology. May be used for general education credit.

POSC 230. International Relations

Credits 3.00 PeopleSoft Course ID 004939 Grading Basis GRD

A survey of the field of international relations including consideration of the elements of national power, foreign policy, diplomacy, propaganda, foreign aid, war, international law and international organization.

POSC 240. Comparative Politics

Credits 3.00 PeopleSoft Course ID 005989 Grading Basis GRD

A comparative study of selected political systems. Emphasis is on the structure of government, the political process and the conditions which either promote or constrain political change and stability.

POSC 295. Research Methods

Credits 4.00 PeopleSoft Course ID 003651 Grading Basis GRD

Students learn how to conduct original research from theory formulation through data collection and hypothesis testing. Special emphasis on research and computer literacy. **Prerequisite(s):** *MATH 220, POSC 225, and one of the following: POSC 230, POSC 240, PPA 200 or PPA 265.*

POSC 300. Politics and Film

Credits 3.00 PeopleSoft Course ID 012660 Grading Basis GRD

This course examines the relationship between politics and film, broadly construed. The ability of film to inform and promote agendas on key political issues, and the way in which films reflect the world of ideas and political culture in which they are created will be explored in substantive areas that may include: social and political change, human rights and justice, the portrayal of political processes and institutions, and foreign policy.

POSC 301W. The Washington Semester Experience

Credits 3.00 PeopleSoft Course ID 000288 Grading Basis GRD

A study of the manner in which the policy making process is conducted on the federal level. The function of political and governmental institutions in establishing public policy is examined through readings and observation. **Prerequisite:** Enrollment in Washington Semester program. **Prerequisite(s):** *Enrollment in the Washington Semester program.*

POSC 302. State & Local Gov

Credits 3.00 PeopleSoft Course ID 001454 Grading Basis GRD

A study of state and local government in the United States with particular focus on Virginia. Emphasis is placed on an understanding of the framework, functions, and problems of state and local governments.

POSC 310. Ancient Political Theory: Classical Greek Political Philosophy to Roman Stoicism

Credits 3.00 PeopleSoft Course ID 007858 Grading Basis GRD

This course is a study of the foundations of Western political theory as established by Plato and Aristotle, and developed by subsequent thinkers. **Prerequisite(s):** *POSC 201.*

POSC 311. The Ideas and Legacies of Medieval and Renaissance Political Theory

Credits 3.00 PeopleSoft Course ID 014491 Grading Basis GRD

This course is a study of the ideas, principles and legacy of political theory as developed within the Middle Ages and the Renaissance. Among others, and with some variation, works by St. Augustine, Alfarabi, Maimonides, St. Thomas Aquinas, Dante, Marsiglio of Padua, Christine de Pizan, Marsiglio Ficino and Machiavelli will be read. Other figures may also be covered, time permitting. **Prerequisite(s):** *POSC 201.*

POSC 315. Political Theory: Early Modern to the 19th Century

Credits 3.00 PeopleSoft Course ID 004622 Grading Basis GRD

A study of political theory from Hobbes and Locke to Hegel, Green and other 19th century thinkers. The course will examine such ideas as freedom, political obligation, justice, progress, ethics and politics, and the relationship between the individual and the human polity.

POSC 316. Contemporary Political Theory

Credits 3.00 PeopleSoft Course ID 004143 Grading Basis GRD

An examination of political thinkers and their ideas from the end of the 19th century to the present. Special emphasis will be placed on the writings of

Hannah Arendt, Jurgen Habermas, John Rawls and other contemporary thinkers who continue to engage in the pursuit of political inquiry.

POSC 321. Political Theory and Ideology

Credits 3.00 PeopleSoft Course ID 007115 Grading Basis GRD

A study of the relationship between normative political theory and ideology, emphasizing the philosophic foundations of modern political thought and its relationship to the emergence of various ideological positions in the 19th and 20th centuries. Includes a study of liberalism, conservatism, socialism, anarchism, nationalism, fascism, feminism, environmentalism and others.

POSC 325. Constitutional Law

Credits 3.00 PeopleSoft Course ID 005504 Grading Basis GRD

A study of the legal aspects of the American democratic system. The development of the Constitution will be explored and case studies used to portray important events and changes.

POSC 326. Civil Rights

Credits 3.00 PeopleSoft Course ID 003331 Grading Basis GRD

An examination of the judicial interpretation of civil rights in America with emphasis on freedom of speech, due process of law and equal protection under the 14th Amendment.

POSC 330. American Political Thought

Credits 3.00 PeopleSoft Course ID 002019 Grading Basis GRD

A study of the development and significance of political ideas that have influenced American society and government. **Prerequisite(s):** *POSC 201*

POSC 331. Human Rights in Theory and Practice

Cross listed with: *HUMN 331, JUST 331*

Credits 3.00 PeopleSoft Course ID 011808 Grading Basis GRD

This course will explore the nature and value of human rights by investigating some major debates over their status and meaning, and by examining some of the ways people have tried to secure human rights in practice. **Prerequisite(s):** *Political science and international affairs majors only.*

POSC 332. African American Political Thought

Credits 3.00 PeopleSoft Course ID 014492 Grading Basis GRD

This three-credit course examines central questions in African American political thought from the American Revolution to the present. Broadly speaking, students will consider what African American thinkers have said about their place in and relationship to American democracy. In so doing, students will also consider what those writers have said regarding a range of issues central to modern political thought more generally, including the nature of democratic life, identity and "race" solidarity, the use of violence in politics, the nexus between gender, race, and power, and more. **Prerequisite(s):** *POSC 201.*

POSC 333. American Political Thought II: Civil War to the Present

Credits 3.00 PeopleSoft Course ID 013854

This course explores American political thought from Reconstruction (ca. 1866) to the present day, drawing largely on primary sources, including writings by political leaders and activists, political theorists, philosophers, public intellectuals and religious thinkers. **Prerequisite(s):** *POSC 201 .*

POSC 334. Political Thought of James Madison

Credits 3.00 PeopleSoft Course ID 013936 Grading Basis GRD

This course examines the political thought of James Madison (1751-1836). Madison was a profound political thinker who read voraciously, thought deeply, and wrote eloquently and carefully about many of the leading political questions of his day—and ours. In this class, we will read, understand and critically assess what Madison contributed to these political dialogues and more generally to the American political tradition. **Prerequisite(s):** *POSC 201.*

POSC 335. Comparative Politics for Teachers**Credits 3.00 PeopleSoft Course ID 012428 Grading Basis GRD**

This course examines the core themes, concepts and debates in the subfield of Comparative Politics and how they apply to politics in selected countries around the world. The course emphasizes those themes and cases of greatest use to students pursuing careers in education and explores approaches to teaching this content in a variety of classroom settings.

POSC 340. Politics of Development**Credits 3.00 PeopleSoft Course ID 008634 Grading Basis GRD**

A comparative study of the processes of political development in the developing nations of the Middle East, Africa, Asia and Latin America. Attention is given to the special problems confronting these nations and their implications for the global systems.

POSC 341. Social Movements in the U.S. and Abroad**Credits 3.00 PeopleSoft Course ID 013937 Grading Basis GRD**

In recent decades, social movements have mobilized people concerned about issues ranging from the rights of ethno-racial minorities, women, sexual minorities and immigrants to the environment, human rights and world peace. This course will examine the origins, modes of action and impact of such movements. We will apply the comparative method to analyze social movements in the United States and abroad, investigating how different socioeconomic and political contexts shape social movements based on common issues. The course will emphasize how social movements emerge and function within and alongside existing structures of formal politics.

POSC 344. Politics of the European Union**Credits 3.00 PeopleSoft Course ID 011901 Grading Basis GRD**

The course offers an in-depth consideration of the political development of the European Union, the EU policy-making process, and contemporary issues that confront European leaders and citizens.

POSC 345. Politics of Western Europe**Credits 3.00 PeopleSoft Course ID 002969 Grading Basis GRD**

This course involves comparative analysis of the development and dynamics of political regimes in western Europe. Attention is given to political institutions, political participation, public policy, and political and economic trends since 1945.

POSC 346. Politics of Central and Eastern Europe**Credits 3.00 PeopleSoft Course ID 011900 Grading Basis GRD**

This course involves comparative analysis of the development and dynamics of political regimes in central and eastern Europe. Attention is given to pre-communist, communist, and post-communist politics and to explaining political and economic trends since 1989.

POSC 347. Comparative Public Policy**Credits 3.00 PeopleSoft Course ID 004240 Grading Basis GRD**

A study of public policy formation and implementation in selected advanced industrial and Third World nations.

POSC 348. The Politics of Cultural Pluralism**Credits 3.00 PeopleSoft Course ID 012044 Grading Basis GRD**

This course examines the various manifestations of cultural pluralism, a situation that occurs when multiple ethnic, religious, and/or linguistic groups coexist within a single state. This course considers different institutional and policy approaches to coping with cultural pluralism.

POSC 350. Latin American Politics**Credits 3.00 PeopleSoft Course ID 001397 Grading Basis GRD**

A comparative study of the political institutions, processes and current issues in the Latin American states, and an analysis of their importance in regional and global relations.

POSC 351. Topics in American Politics**Credits 3.00 PeopleSoft Course ID 004816 Grading Basis GRD**

In-depth exploration of specialized topics in the area of American politics. The topic for each semester will be announced on MyMadison.

POSC 353. African Politics**Credits 3.00 PeopleSoft Course ID 011594 Grading Basis GRD**

A comparative study of the institutions and social, economic, and global processes that affect contemporary African states. Political developments explored include the construction and transformation of postcolonial states, ethnic conflict, economic crisis and reform, and regime change.

POSC 354. Politics of the Middle East**Credits 3.00 PeopleSoft Course ID 012161 Grading Basis GRD**

This course involves comparative analysis of political institutions, social dynamics and economic processes in the contemporary Middle East. The course also focuses on the ways that global developments affect and are affected by Middle Eastern states and peoples.

POSC 355. East Asian Politics**Credits 3.00 PeopleSoft Course ID 005283 Grading Basis GRD**

A study of the political systems of the major countries of East Asia, including Japan, China and Korea. Issues discussed include political development and democratization movements in the People's Republic of China, the Republic of China and the Republic of Korea.

POSC 356. Politics of China**Credits 3.00 PeopleSoft Course ID 013475 Grading Basis GRD**

This undergraduate course provides an introduction to key institutions, transformations, and issues in contemporary Chinese politics.

POSC 361. Topics in International Relations**Credits 3.00 PeopleSoft Course ID 007204 Grading Basis GRD**

In-depth exploration of specialized topics in the field of international affairs. The topic for each semester will be announced on MyMadison.

POSC 362. Political Behavior**Credits 3.00 PeopleSoft Course ID 002188 Grading Basis GRD**

A study of how citizens acquire politically relevant attitudes and how these attitudes influence their political behavior. The effects of the mass media on voting behavior are also considered. Emphasis is placed on U.S. voting behavior but behavior in other nations is also covered. **Prerequisite(s):** POSC 225.

POSC 363. Hacking for Diplomacy**Credits 3.00 PeopleSoft Course ID 013938 Grading Basis GRD**

Hacking for Diplomacy is a project-orientated course that takes real problems from the Department of State, the intelligence community and other federal departments and agencies and has students use the Lean Launch Pad Methodology to test problem understanding and potential solutions. The course provides students the opportunity to serve as resource to help address critical problems facing the U.S. government today. Participation in this course promotes engagement between students and stakeholders from a range of government agencies and provides hands-on opportunity to solve real national security and foreign policy problems. A network of such courses across the U.S. is providing a system that can develop solutions that match government end users' in weeks. **Prerequisite(s):** POSC 230 and POSC 240.

POSC 364. Political Parties in America**Credits 3.00 PeopleSoft Course ID 013939 Grading Basis GRD**

This course will focus solely on the central role of political parties in the United States. Even though parties are not mentioned in the U.S. Constitution and the framers despised them, they quickly formed and have come to dominate our political environment. Fully understanding political parties is essential for the political science student. **Prerequisite(s):** POSC 225 or permission of the instructor.

POSC 365. American Political Campaigning

Credits 3.00 PeopleSoft Course ID 004439 Grading Basis GRD

Study of modern day political campaigning with emphasis on campaign structure, strategy, and the relationship between candidates and political consultants. The course assesses the consequences of the changing nature of political campaigns for democracy in the United States. **Prerequisite(s):** POSC 225.

POSC 366. Introduction to the Politics of Race and Ethnicity

Credits 3.00 PeopleSoft Course ID 014493 Grading Basis GRD

This course is centered on the politics of race and ethnicity within the United States of America. More specifically, it discusses how the U.S. government has and continues to shape patterns of racial inequality through public policy. By the end of the course, students will develop a broad, conceptual understanding of how racism is woven into the fabric of our society. **Prerequisite(s):** POSC 225.

POSC 367. U.S. Immigration and Refugee Law

Credits 3.00 PeopleSoft Course ID 012429 Grading Basis GRD

This course provides a historical context to the current conversations regarding immigrant integration, immigration policy and immigration reform. The course will focus on the development of our nation's immigration policies and the role that the social construction of race and gender has played in shaping decisions regarding immigration and citizenship. The course will also focus on international and forced migration, including the laws that govern those seeking refuge and asylum, and asylum policy in the U.S. **Prerequisite(s):** POSC 225.

Corequisite(s):

POSC 368. Interest Groups, Lobbying and Public Policy

Credits 3.00 PeopleSoft Course ID 010075 Grading Basis GRD

An analysis of the mobilization and lobbying activities of interest groups in the American public policy system, with an emphasis on the origin and maintenance of interest organizations; diversity and bias in the interest group system; lobbying influence and policy advocacy strategies, tactics, and targets; and the regulation of lobbying and related campaign finance activities. **Prerequisite(s):** POSC 225 or permission of the instructor.

POSC 369. Elections and Voting Behavior

Credits 3.00 PeopleSoft Course ID 005758 Grading Basis GRD

The electoral process is one of the primary means by which Americans can hope to influence public officials, and thus public policy, in the United States. Elections provide voters an opportunity to hold political officials and political parties responsible for their actions in office; ideally, elections as a means of accountability should serve to keep office holders responsive to the public's needs. In reality, however, there are many impediments that may preclude the democratic system from functioning as effectively as it should, such as low levels of voter knowledge and voter turnout, changes in primary election scheduling, and even mathematical complications posed by the Electoral College system. Only by studying elections can we understand the complexity of our political environment, and how factors beyond voter preferences and candidate agendas can shape election outcomes in the United States. **Prerequisite(s):** POSC 225.

POSC 370. U.S. Foreign Policy

Credits 3.00 PeopleSoft Course ID 004288 Grading Basis GRD

An investigation of the processes for making foreign policy, underlying premises influencing specific policies and substance of American foreign policy. **Prerequisite(s):** POSC 230

POSC 371. Topics in Comparative Politics

Credits 3.00 PeopleSoft Course ID 011595 Grading Basis GRD

In-depth exploration of specialized topics in the area of comparative politics. The topic for each semester will be announced on MyMadison.

POSC 371L. Special Studies London

Credits 3.00 PeopleSoft Course ID 004239 Grading Basis GRD

An introduction to English government and law. Outings include visits to the Houses of Parliament, trials, and other events of political and legal import.

POSC 371S. Special Studies Salamanca

Credits 3.00 PeopleSoft Course ID 005117 Grading Basis GRD

A comparative study of political systems in Spain and the United States. Emphasis on historical and contemporary issues. **Prerequisite(s):** *Studies Abroad-Salamanca*

POSC 372. Ethics and International Politics

Cross listed with: JUST 372

Credits 3.00 PeopleSoft Course ID 011805 Grading Basis GRD

This course investigates the significance of ethical questions in the theory and practice of contemporary international politics, introducing a variety of normative approaches that shape the issues of peace and conflict, morality and justice in global affairs. Practical case studies will also be used to address issues of policy relevance, with particular attention paid to the American experience. **Prerequisite(s):** JUST, POSC, and INTA majors only. For JUST majors: JUST 235.

POSC 375. Latina/o/x Politics: Origins and Futures

Cross listed with: LAXC 375

Credits 3.00 PeopleSoft Course ID 014594 Grading Basis GRD

The course will focus on the Latina/o/x populations in the United States and how the category of 'Latino' came into existence. Furthermore, students will learn how Latina/o/x identity has evolved over time as well as become politically salient within 21st century politics. The goal is for the student to develop a broad, conceptual understanding of how the term 'Latino' came into existence as well as how individuals who identify as 'Latina/o/x' have politically organized throughout history. **Prerequisite(s):** POSC 225.

POSC 376. Introduction to Black Politics

Credits 3.00 PeopleSoft Course ID 014591 Grading Basis GRD

This course is an introduction to how Black political scientists and Black communities have developed and articulated a *Weltanschauung* or worldview that situates their political thought, behavior, productions, leadership and pathways to liberation from historical, contemporary, transnational and intersectional frameworks. Topics discussed in this course include political organizing for social justice; political thought and philosophy; formal and informal political leadership; race, gender, class and sexuality; electoral politics; and more.

POSC 377. Global Black Feminist Politics: On Power, Resistance and Transformation

Credits 3.00 PeopleSoft Course ID 014592 Grading Basis GRD

This course explores how anti-Blackness, racialization, transphobia, misogyny, violence and more impact the everyday lives of Black women and gender expansive communities from a transnational Black feminist lens.

POSC 378. Borderlands Policy: Latina/o/x Politics in Context

Cross listed with: LAXC 378

Credits 3.00 PeopleSoft Course ID 014502 Grading Basis GRD

This course is centered on the policies surrounding the U.S. and Mexico border, with a focus on the effect these policies have had on Latina/o/x populations. Students will examine peer-reviewed studies of immigration policy, public opinion and political rhetoric, as well as individual accounts of the immigrant experience. By the end of the course, students will have an increased understanding of how border policy has historically evolved and the Latino/a/x population reactions across time. **Prerequisite(s):** POSC 225.

POSC 379. International Laws of War**Credits 3.00 PeopleSoft Course ID 014501 Grading Basis GRD**

This course takes a close look at key topics in international laws of war, also known as international humanitarian law (IHL). It is intended to be a survey of international laws of war. It is assumed that students are coming to the course with no or little background in this area of the law (either through study or prior experience), or in related fields. Building upon a foundation of assigned readings on core IHL topics, this course will examine complex and controversial topics such as drone warfare, human rights in counterterrorism and the obligations of military personnel. Students will acquire knowledge of IHL by discovering its rules applicable to practical cases taken from contemporary practice.

POSC 380. The U.S. Presidency**Credits 3.00 PeopleSoft Course ID 003611 Grading Basis GRD**

A study of the institution of the American presidency focusing on the sources, bases and character of the power required by the president for effective executive action. Relationships of the presidency to foreign affairs, Congress, the public, party structure and the administrative establishment will also be considered. **Prerequisite(s):** POSC 225.

POSC 381. Topics in Political Theory**Credits 3.00 PeopleSoft Course ID 011596 Grading Basis GRD**

In-depth exploration of specialized topics in the area of political theory. The topic for each semester will be announced on MyMadison.

POSC 382. The Role of Religion in American Politics**Credits 3.00 PeopleSoft Course ID 012462 Grading Basis GRD**

An examination of the role religion has played and continues to play in American politics. Besides providing an overview of how religion has influenced electoral, legislative, and judicial outcomes, the course will provide an in-depth examination of particular aspects of religion's role in political life.

Prerequisite(s): POSC 225 or *Permission of the Instructor*.

POSC 383. Women and Politics in Comparative Perspective

Cross listed with: WGSS 383

Credits 3.00 PeopleSoft Course ID 011418 Grading Basis GRD

A study of the causes and consequences of women's political marginalization in the United States and abroad. The course examines socioeconomic and political dimensions of gender inequality, exploring how women have worked through social movements, electoral politics, and public policy initiatives to overcome obstacles to their political empowerment.

POSC 384. Minority Group Politics**Credits 3.00 PeopleSoft Course ID 012303 Grading Basis GRD**

This course examines the role of minority groups in American Politics. Attention is given to five groups (African Americans, Asian Americans, Native Americans, Latinos and women) that for reason of race or gender have faced institutional discrimination and political domination in the United States.

POSC 385. The U.S. Congress**Credits 3.00 PeopleSoft Course ID 003505 Grading Basis GRD**

Study of the legislative process will concentrate on the operation of Congress with regard to such matters as its rules and procedure; relationships to the presidency, the bureaucracy, pressure groups and the courts; and a discussion of its current problems. **Prerequisite(s):** POSC 225.

POSC 386. The U.S. Judiciary**Credits 3.00 PeopleSoft Course ID 011940 Grading Basis GRD**

An investigation of the American court system. The course focuses on the role of the judiciary in American politics, the difference between judicial and other political and bureaucratic decision-making processes, the selection of judges, the decisions made by judges and other actors interacting with the courts, and the impact of court decisions on American society.

POSC 387. The Appellate Process and Practice**Credits 3.00 PeopleSoft Course ID 013589 Grading Basis GRD**

An examination of the Supreme Court appellate process in the United States from its beginnings with the lower court opinion through oral argument. Class is conducted as a seminar in which students are expected to engage actively. Students study substantive areas of constitutional law and the common law system of precedent.

POSC 389. Hacking for National Security and Defense**Credits 3.00 PeopleSoft Course ID 014649 Grading Basis GRD**

This is a project-oriented course that takes real problems from the Department of Homeland Security, the Department of Defense and other federal agencies and has students use design thinking and entrepreneurial start-up principles to test problem understanding and potential solutions. The course provides students the opportunity to serve as a resource to help address critical problems facing the U.S. government today. Participation in this course promotes engagement between students and stakeholders from a range of government agencies and provides a hands-on opportunity to solve real national security and defense problems. **Prerequisite(s):** POSC 230, POSC 240 and *permission of instructor*.

POSC 391. Topics in Public Policy**Credits 3.00 PeopleSoft Course ID 011765 Grading Basis GRD**

In-depth exploration of specialized topics in the area of public policy. The topic for each semester will be announced on MyMadison.

POSC 392. Peace Studies

Cross listed with: JUST 392

Credits 3.00 PeopleSoft Course ID 011458 Grading Basis GRD

A study of the evolution, theory and practice of peace studies. The course focuses on how we wage and resolve conflict, how we effect social change, and how we provide for security through nonviolent means.

POSC 393. Human Security**Credits 3.00 PeopleSoft Course ID 013590 Grading Basis GRD**

This course examines the concept of security in a globalized world, paying particular attention to threats to individuals and groups in the post-Cold War international system. Topics include the transition from state security to individual security, human development, human rights, military intervention, responsibility to protect, and global governance. **Prerequisite(s):** POSC 230

POSC 394. International Conflict**Credits 3.00 PeopleSoft Course ID 013591 Grading Basis GRD**

A study of the causes and consequences of violent political conflict between and within states. The course emphasizes the theoretical explanations of conflict initiation, escalation, and termination, with applications to both individual cases and broader patterns of conflictual behavior. **Prerequisite(s):** POSC 230

POSC 395. International Law

Credits 3.00 PeopleSoft Course ID 003890 Grading Basis GRD

Examination of the role of international law in world politics. Particular attention will be given to the effects of international law on patterns of international exchange and interaction. Case study and other forms of political analysis will be used.

POSC 396. International Organizations**Credits 3.00 PeopleSoft Course ID 000468 Grading Basis GRD**

Study of the evolution and role of contemporary international organizations in the larger context of world politics. Emphasis on the ways in which the changing patterns of political power influence the processes and effectiveness of such organizations.

POSC 397. The Politics of International Economic Relations**Credits 3.00 PeopleSoft Course ID 004560 Grading Basis GRD**

A study of the political dynamics and implications of international economic relations.

POSC 398. Simulations**Credits 3.00 PeopleSoft Course ID 007088 Grading Basis GRD**

Application of concepts and insights learned in the classroom to contemporary policy problems and practical activities. The topic of this course will vary from offering to offering. The exact courses required will vary with the subject matter of the simulation.

POSC 430. International Security and Conflict Management**Credits 3.00 PeopleSoft Course ID 002007 Grading Basis GRD**

This course examines major threats to international security in the post-Cold War world. Topics include the changing global security environment, proliferation of weapons of mass destruction, terrorism and ethnic conflict. The effectiveness of economic sanctions, deterrence, international organizations, preventative war and other tools in dealing with these threats in critically examined.

POSC 435. International Terrorism**Credits 3.00 PeopleSoft Course ID 005469 Grading Basis GRD**

Systematic study of political terrorism with emphasis upon the destabilizing effect that it has upon the international community.

POSC 440. Post-Conflict Societies**Credits 3.00 PeopleSoft Course ID 013598 Grading Basis GRD**

An examination of the political dynamics of social, economic, security and governance problems faced in rebuilding societies that are emerging from a period of intense conflict. Emphasis on institutional and behavioral challenges brought about by conflict; strategies employed by domestic and international actors to promote democratic, just and secure societies after conflict; and standards that can be used to assess the success, failure and durability of a newly emerging political system.

POSC 457. Fates of Empires

Cross listed with: HIST 357

Credits 3.00 PeopleSoft Course ID 012674 Grading Basis GRD

Comparative empires is an examination of imperialism from 1450 to the present. Focusing on no less than four empires, the course will apply a variety of theoretical approaches in a series of case studies with at least one empire from the period of exploration and one from 1919 to the present. Students will employ approaches from history, political science, economics and geography as they search for a deeper understanding of each case study and the broader concept of empire. **Corequisite(s):** For students with an ISS minor, this course must be taken with MSSE 412.

POSC 458. International Political Analysis**Credits 3.00 PeopleSoft Course ID 012045 Grading Basis GRD**

An examination of techniques and principles for the analysis of future political conditions and future government decisions.

POSC 472. Media and Politics

Cross listed with: POSC 472L, POSC 472W, SCOM 472, SCOM 472L, SMAD 472, SMAD 472L

Credits 3.00 PeopleSoft Course ID 008709 Grading Basis GRD

This course is a study of the media's role in the political system, concentrating on the dynamic and interdependent relationships among journalists, politicians, the public and public policy. The course explores media and politics theories; how media practices and technologies shape political decision making; how political forces influence media institutions; and how public opinion and media narratives are shaped.

POSC 472L. Media and Politics

Cross listed with: POSC 472, POSC 472W, SCOM 472, SCOM 472L, SMAD 472, SMAD 472L

Credits 3.00 PeopleSoft Course ID 008709 Grading Basis GRD

This course is a study of the media's role in the political system, concentrating on the dynamic and interdependent relationships among journalists, politicians, the public and public policy. The course explores media and politics theories; how media practices and technologies shape political decision making; how political forces influence media institutions; and how public opinion and media narratives are shaped. **Prerequisite(s):** Studies Abroad-London.

POSC 472W. Media and Politics

Cross listed with: POSC 472, POSC 472L, SCOM 472, SCOM 472L, SMAD 472, SMAD 472L

Credits 3.00 PeopleSoft Course ID 008709 Grading Basis GRD

This course is a study of the media's role in the political system, concentrating on the dynamic and interdependent relationships among journalists, politicians, the public and public policy. The course explores media and politics theories; how media practices and technologies shape political decision making; how political forces influence media institutions; and how public opinion and media narratives are shaped.

POSC 492. Senior Seminar in Political Science**Credits 3.00-4.00 PeopleSoft Course ID 009517 Grading Basis GRD**

This research-oriented senior seminar provides an overview of the discipline of political science and the different approaches to research in the field. A major research project will strengthen the research, information access and lifelong learning capacities of the student. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** Senior standing and POSC 295.

POSC 493. Political Communication Internship**Credits 4.00 PeopleSoft Course ID 013244 Grading Basis GRD**

This course will provide students with experiential learning opportunities in policymaking, campaigning, media, legislative politics and lobbying. A research paper relating the internship to the student's academic work will enhance the learning experience. **Prerequisite(s):** Junior or senior standing; POSC 225 and one other core political communication required course.

POSC 493W. Political Communication Internship in Washington**Credits 6.00 PeopleSoft Course ID 013257 Grading Basis GRD**

This Washington semester course will provide students with experiential learning opportunities in policymaking, campaigning, media, legislative politics and lobbying. A research paper relating the internship to the student's academic work will enhance the learning experience. **Prerequisite(s):** Junior or senior standing; POSC 225 and one other core political communications required course.

POSC 495. Internship in Political Science

Credits 4.00 PeopleSoft Course ID 007688 Grading Basis GRD

Provides students with opportunities for experiential learning in a legislative, policy-making, campaign, constituency, interest group or criminal justice organization. A research paper related to the internship and a presentation based on the experience are required. No more than four credit hours can be counted toward the political science major. **Prerequisite(s):** *Junior or senior standing, 15 credits of political science, public administration or political communication and permission of the instructor.*

POSC 495W. Washington Semester Internship in Political Science

Credits 6.00 PeopleSoft Course ID 010417 Grading Basis GRD

Provide Washington Semester participant with opportunities for experiential learning in a Washington, D.C.-based legislative, policy making, campaign, constituency, interest group or criminal justice organization. Requirements include 360 work hours, a research paper related to the internship, a career report, a daily log, and regular meetings with faculty-in-residence.

*No more than four credit hours can be counted toward the political science major.

Prerequisite(s): *Junior or senior standing, 15 credits of political science, public administration or political communication, and successful application to Washington Semester program.*

POSC 498. Research in Political Science

Credits 1.00 PeopleSoft Course ID 012608 Grading Basis GRD

Research in a selected area of political science as arranged with a faculty sponsor. Research outline must be approved by faculty sponsor and department head the semester before registration. Course may be repeated.

Prerequisite(s): *A Political Science, International Affairs, or Public Policy and Administration GPA of 2.5 or greater.*

Portuguese

PORT 101. Elementary Portuguese I

Credits 3.00 - 4.00 PeopleSoft Course ID 012467 Grading Basis GRD

The fundamentals of Portuguese through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. Students will receive no credit for the course if he/she has had two or more years of the language in high school.

PORT 102. Elementary Portuguese II

Credits 3.00 - 4.00 PeopleSoft Course ID 012493 Grading Basis GRD

The fundamentals of Portuguese through a higher level of listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. Students will receive no credit for the course if he/she has had two or more years of the language in high school. **Prerequisite(s):** *PORT 101*

PORT 231. Intermediate Portuguese I

Credits 3.00 PeopleSoft Course ID 012494 Grading Basis GRD

A thorough review of first year grammar and vocabulary building. Conversation, composition and readings will be chosen to reach competency at the lower intermediate level Portuguese. **Prerequisite(s):** *PORT 102 or permission of the instructor.*

PORT 232. Intermediate Portuguese II

Credits 3.00 PeopleSoft Course ID 012692 Grading Basis GRD

A thorough review of PORT 231 grammar and vocabulary building. Conversation, composition and readings will be chosen to reach competency at the advance intermediate level. **Prerequisite(s):** *PORT 231 or permission of instructor.*

PORT 300. Portuguese Grammar and Communication

Credits 3.00 PeopleSoft Course ID 013107 Grading Basis GRD

Intensive training in grammatical structures and their application to oral and written communication. Instruction is in Portuguese. Fulfills the College of Arts and Letters writing-intensive requirement for possible International Affairs majors and/or IBUS majors. **Prerequisite(s):** *PORT 232 or permission of the instructor*

PORT 320. Portuguese Oral and Written Communication

Credits 3.00 PeopleSoft Course ID 013108

Intensive training in the use of modern, everyday Portuguese with emphasis on conversation and composition. Readings in Portuguese will provide a context for discussion and writing. **Prerequisite(s):** *PORT 300.*

PORT 490. Special Topics in Portuguese

Credits 1.00 - 4.00 PeopleSoft Course ID 012693 Grading Basis GRD

Special topics or independent studies in Portuguese.

Psychology

PSYC 100. Interpersonal Skills for Resident Advisers

Credits 1.00 PeopleSoft Course ID 000246 Grading Basis GRD

Designed to give resident adviser trainees understanding of interpersonal relations. Cannot be used as a psychology major elective. May be used for general education credit. **Prerequisite(s):** *Limited to students selected as resident advisers.*

PSYC 101. General Psychology [C5SD]

Credits 3.00 PeopleSoft Course ID 010444 Grading Basis GRD

A study of the nervous system, sensation, perception, consciousness, learning, memory, language, intelligence, motivation, emotion, life span development, personality, psychopathology, psychotherapy, social psychology and the scientific method. May be used for general education credit.

PSYC 101H. General Psychology - Honors [C5SD]

Credits 3.00 PeopleSoft Course ID 006788 Grading Basis GRD

A study of the nervous system, sensation, perception, consciousness, learning, memory, language, intelligence, motivation, emotion, life span development, personality, psychopathology, psychotherapy, social psychology and the scientific method. May be used for general education credit. **Prerequisite(s):** *Honors Students*

PSYC 105. Orientation to the Major

Credits 1.00 PeopleSoft Course ID 014212 Grading Basis GRD

This course will provide psychology majors with knowledge and tools to get the most out of the major. Topics include an introduction to the psychology major at JMU, strategies for discerning between credible and non-credible information, professional (e.g., student/professor) communication and campus learning support resources. This course is only available for students who have not yet completed the two-semester methodology sequence. **Prerequisite(s):** *Declared psychology major and PSYC 101.*

PSYC 106. Preparing for Graduate School with a Psychology Major

Credits 1.00 PeopleSoft Course ID 014223 Grading Basis GRD

This course will guide students through graduate school selection and application processes. Coverage includes graduate training opportunities across sub-disciplines in psychology and appropriate preparation to pursue such opportunities. Topics include participating in research and fieldwork experiences, preparing for and taking the GREs, selecting appropriate programs, and applying to graduate schools (including letters of recommendation, interviews, and writing curriculum vitae and personal statements). **Prerequisite(s):** *PSYC majors only; PSYC 101.*

PSYC 107. Preparing for a Job with a Psychology Major

Credits 1.00 PeopleSoft Course ID 014224 Grading Basis GRD

Students will focus on the skills psychology majors can develop to prepare for a variety of careers. Students will discuss what types of jobs will be available to them upon graduation with an undergraduate degree in psychology. Topics will include resume-building, cover letter writing, interviewing and leveraging undergraduate experiences when applying for a job. **Prerequisite(s):** PSYC majors only; PSYC 101.

PSYC 122. The Science of Vision and Audition [C3NS]**Credits 3.00 PeopleSoft Course ID 007557 Grading Basis GRD**

A study of human interaction with light and sound waves. Topics include physiological and perceptual mechanisms for processing light and sound, along with connections to real-world applications (e.g., human factors and careers within vision science and audition). Includes activities designed to provide students with in-depth, hands-on experience with course topics. May be used for general education credit.

PSYC 160. Life Span Human Development [C5SD]**Credits 3.00 PeopleSoft Course ID 009787 Grading Basis GRD**

An introduction to human development. Emphasis is on life span processes within physical, emotional, cognitive, psychosexual, social, personality and moral development. May be used for general education credit.

PSYC 180. Introduction to Behavior Analysis**Credits 3.00 PeopleSoft Course ID 011739 Grading Basis GRD**

Students will learn the fundamental principles, procedures, and concepts of behavior analysis, how they can be used to explain behavior, and how interventions based on these principles can be used to improve their own lives and the lives of others.

PSYC 200. Topics in Psychology**Credits 1.00 - 3.00 PeopleSoft Course ID 004875 Grading Basis GRD**

Exploration of an important psychological topic. The topics for each semester will be announced on MyMadison and the departmental website. **Prerequisite(s):** PSYC 101.

PSYC 202. Directed Studies in Psychology**Credits 1.00 - 3.00 PeopleSoft Course ID 002152 Grading Basis GRD**

Designed to give capable students an opportunity to complete directed study in an area of psychology under faculty guidance. Experiences may include practica, serving as a teaching assistant, directed readings or similar experience. **Prerequisite(s):** PSYC 101 and a written plan for the directed study must be submitted to the department head for approval one week prior to registration.

PSYC 203. Directed Research in Psychology**Credits 1.00 - 3.00 PeopleSoft Course ID 013486 Grading Basis GRD**

An introductory opportunity to assist a faculty member with a research project. Students may participate in any or all phases of research, including completion of background research, study design, collection of data, data analysis, and interpretation. Specific requirements of project are determined by the instructor. **Prerequisite(s):** PSYC 101 and a written plan for the directed study must be submitted to the department head for approval one week prior to registration.

PSYC 210. Psychological Measurement and Statistics**Credits 4.00 PeopleSoft Course ID 003223 Grading Basis GRD**

This course provides an introduction to statistical techniques used by psychologists in measuring behavior. Fundamental measures and theory of descriptive and inferential statistics will be discussed. The use of computers for data analysis will be introduced. **Prerequisite(s):** PSYC 101 and MATH 205, MATH 220, MATH 231, or MATH 235 with a grade of C- or better.

PSYC 211. Psychological Research Methods**Credits 4.00 PeopleSoft Course ID 001375 Grading Basis GRD**

This course provides an introduction to the application of scientific methodology to investigate psychological phenomenon. Through lecture and laboratory, attention is given to choosing research questions, developing hypotheses, designing and conducting research, describing, analyzing and evaluating data, and effectively communicating research findings.

Prerequisite(s): PSYC 101 and PSYC 210 with a "C-" or better.

PSYC 212. Psychological Research Design and Data Analysis I**Credits 4.00 PeopleSoft Course ID 011737 Grading Basis GRD**

The PSYC 212-213 course sequence introduces the logic of pursuing a scientific approach in psychology and covers descriptive, correlational, experimental, and quasi-experimental approaches. It also covers the statistical tools associated with these methods (namely, descriptive statistics, correlation, regression, t-tests, and ANOVA), and it introduces the basics of inferential statistics and hypothesis testing. **Prerequisite(s):** PSYC 101 and MATH 205, MATH 220, MATH 231, or MATH 235 with a grade of C- or better

PSYC 213. Psychological Research Design and Data Analysis II**Credits 4.00 PeopleSoft Course ID 011738 Grading Basis GRD**

The PSYC 212-213 course sequence introduces the logic of pursuing a scientific approach in psychology and covers descriptive, correlational, experimental, and quasi-experimental approaches. It also covers the statistical tools associated with these methods (namely, descriptive statistics, correlation, regression, t-tests, and ANOVA), and it introduces the basics of inferential statistics and hypothesis testing. **Prerequisite(s):** PSYC 212 with a grade of C- or better

PSYC 220. Psychology and Culture**Credits 3.00 PeopleSoft Course ID 011736 Grading Basis GRD**

The study of human psychology is incomplete without taking into account the cultural, historical, and social factors involved in human functioning. This course considers the ethnic and cultural variations that exist in human behavior, thought, and action. Course meets sociocultural course requirement for the Psychology major. **Prerequisite(s):** PSYC 101.

PSYC 235. Psychology of Adjustment**Credits 3.00 PeopleSoft Course ID 010225 Grading Basis GRD**

A study of the process and dynamics of the well-integrated personality and the practical application of adjustment theories and behavior change techniques to enhance personal awareness and self-development.

PSYC 250. Introduction to Abnormal Psychology**Credits 3.00 PeopleSoft Course ID 002464 Grading Basis GRD**

An introduction to the field of Abnormal Psychology, for the non-psychology major. This course will examine methods of defining psychological normality and abnormality and the classification, causes and treatment of abnormal behavior. This course cannot be used for psychology major credit.

Prerequisite(s): PSYC 101 or PSYC 160. A student cannot earn credit for PSYC 250 after completing PSYC 335.

PSYC 261. Study Abroad in Psychology**Credits 1.00-4.00 PeopleSoft Course ID 014197 Grading Basis GRD**

This course involves a study abroad experience including content and application of psychology skills and knowledge in a particular cultural context. Specific content varies based on study abroad location and content focus of the course. Some sections of the course fulfill the sociocultural awareness requirement for the psychology major. **Prerequisite(s):** Three credit hours in psychology; permission of the instructor.

PSYC 270. Foundations of Learning and Cognition for Education

Credits 3.00 PeopleSoft Course ID 008026 Grading Basis GRD

This course introduces fundamental principles of cognition and learning as applied to educational practice. It provides a foundation for understanding multiple perspectives and levels of analysis applied to individual learning in educational settings. **Prerequisite(s):** PSYC 101 or PSYC 160.

PSYC 275. Psychology of Human Intimacy**Credits 3.00 PeopleSoft Course ID 006546 Grading Basis GRD**

Theoretical and applied study of human relationships through case analysis and role play.

PSYC 285. Drugs and Behavior**Credits 3.00 PeopleSoft Course ID 010547 Grading Basis GRD**

An introduction to the pharmacological effects of psychoactive drugs. This course will examine the neural mechanisms and behavioral effects of common substances such as caffeine and nicotine, drugs of abuse and pharmaceuticals that are used to treat mental disorders. **Prerequisite(s):** PSYC 101.

PSYC 301. Psychology Peer Advising Training I**Credits 2.00 PeopleSoft Course ID 002895 Grading Basis OPT**

Introductory training in academic advising, career development, and basic counseling techniques. Not to be used for psychology major credit. Application guidelines available on the psychology website and in the Psychology Peer Advising office. **Prerequisite(s):** PSYC 101, junior standing and permission of the instructor.

PSYC 302. Psychology Peer Advising Training II**Credits 2.00 PeopleSoft Course ID 004935 Grading Basis OPT**

Continued training and supervised experiences in academic advising, career development, and basic counseling techniques. Not to be used for psychology major credit. **Prerequisite(s):** PSYC 301, PSYC 211 or PSYC 213 and permission of the course coordinator.

PSYC 304. Death and Dying: Thanatology**Credits 3.00 PeopleSoft Course ID 003374 Grading Basis GRD**

Psychological theories about death including ways in which individuals and society deal with death. **Prerequisite(s):** PSYC 101.

PSYC 308. Health Psychology**Credits 3.00 PeopleSoft Course ID 008875 Grading Basis GRD**

This course deals with personality and its relation to health and illness behaviors. Topics include psychological factors involved in control and helplessness, conflict management, cardiovascular disorders, cancer, pain, substance abuse and other psychophysiological related factors. Course meets sociocultural requirement for the psychology major. **Prerequisite(s):** PSYC 101.

PSYC 310. The Psychology of Women and Gender**Credits 3.00 PeopleSoft Course ID 003095 Grading Basis GRD**

An examination of research and theory regarding the abilities and behaviors of women and the changing roles of women. Consideration is given to biological, developmental and societal determinants of sex and gender. Course meets sociocultural requirement for the psychology major. **Prerequisite(s):** PSYC 101.

PSYC 316. Human Development and Crime

Cross listed with: JUST 316

Credits 3.00 PeopleSoft Course ID 011453 Grading Basis GRD

This course examines how psychological research and theory shed light on the development of criminal careers, the factors that protect children and adolescents from becoming criminals, how being a victim of crime influences well-being, and the efficacy of rehabilitation. Special attention will be paid to the knowledge base on delinquency and childhood/adolescent victimization.

Prerequisite(s): PSYC 101; For Justice Studies majors: JUST 200 and one

additional 200 level JUST course, excluding JUST 225. For Criminal Justice minors: JUST 210 or CRJU 215. For Youth Justice minors: YTHJ 300.

PSYC 320. Diversity Issues in Psychology**Credits 3.00 PeopleSoft Course ID 011735 Grading Basis GRD**

This course addresses issues of diversity and neglected populations in psychology with attention to gender, sexual orientation, race, ethnicity, disability, chronic illness, SES, age, and level of indigenous influence. Particular cultural stressors associated with each group or demographic are discussed and attention is given to the issue of privilege. Course meets sociocultural requirement for the psychology major. **Prerequisite(s):** PSYC 101.

PSYC 325. Counseling Psychology**Credits 3.00 PeopleSoft Course ID 004703 Grading Basis GRD**

A basic counseling theories and skills course designed for students interested in human service and mental health fields. Course meets sociocultural requirement for the psychology major. **Prerequisite(s):** PSYC 101.

PSYC 326. Leadership and Personal Growth**Credits 3.00 PeopleSoft Course ID 012341 Grading Basis GRD**

The purpose of this course is to foster the understanding and practical application of leadership, through the use of affective and cognitive approaches. There is a strong emphasis on personal growth as it relates to leadership concepts. Aspects of developmental, cognitive, humanistic, and personality psychological theories are included. The course also builds on concepts and issues from Industrial/Organizational psychology. **Prerequisite(s):** PSYC 101 or PSYC 160 and permission of the instructor is the prerequisite.

PSYC 328. The Psychology of Leadership**Credits 3.00 PeopleSoft Course ID 011817 Grading Basis GRD**

This course focuses on psychological components of leadership behavior and its importance to various situations in culture and society. Students will explore the potential impact of leaders and their influence on individuals and society. Various existential, behavior and motivational topics related to leadership studies will be explored. Service learning will also be a core component of the course. **Prerequisite(s):** PSYC 101.

PSYC 330. Psychology of Personality**Credits 3.00 PeopleSoft Course ID 006120 Grading Basis GRD**

Essential elements of leading theories of personality with an emphasis on implications of these theories for human behavior. **Prerequisite(s):** C- or better in PSYC 211 or PSYC 213.

PSYC 335. Abnormal Psychology**Credits 3.00 PeopleSoft Course ID 004374 Grading Basis GRD**

This course for the psychology major critically examines psychological normality and abnormality and the classification, causes and treatment of abnormal behavior. Students learn classification and diagnosis, explore social and multicultural issues relating to diagnosis and discuss research in the field. **Prerequisite(s):** "C-" or better in PSYC 211 or PSYC 213. A student cannot earn credit for PSYC 335 after completing PSYC 250.

PSYC 345. Social Psychology**Credits 3.00 PeopleSoft Course ID 002756 Grading Basis GRD**

The study of how an individual's behavior, feelings and thoughts are influenced by other people. Topics include attitude formation and change, social perception, attraction, altruistic and antisocial behavior, conformity, leadership and group dynamics, and applications of social psychology to other fields.

Prerequisite(s): C- or better in PSYC 211 or PSYC 213.

PSYC 365. Developmental Psychology**Credits 3.00 PeopleSoft Course ID 000902 Grading Basis GRD**

Psychological aspects of growth, development and behavior from birth through adolescence. **Prerequisite(s):** C- or better in PSYC 211 or PSYC 213.

PSYC 375. Sensation and Perception

Cross listed with: PSYC 375

Credits 3.00 PeopleSoft Course ID 001648 Grading Basis GRD

This course explores the nature and development of human sensory capabilities and processing, and how these affect perception of the environment. A potential list of the variety of systems reviewed includes hearing, vision, smell, taste and touch/pain, as well as phenomena such as the perception of balance. **Prerequisite(s):** Psychology majors: PSYC 211 or PSYC 213. Biology majors: Declared biology neuroscience concentration, PSYC 101 or PSYC 160, and MATH 220, MATH 229, MATH 285 or MATH 318.

PSYC 380. Cognitive Psychology

Credits 3.00 PeopleSoft Course ID 007153 Grading Basis GRD

This course explores the nature and development of human attention, memory, language and thinking processes. An information processing approach to the study of human cognition is emphasized. **Prerequisite(s):** C- or better in PSYC 211 or PSYC 213.

PSYC 385. Biopsychology

Cross listed with: PSYC 385

Credits 3.00 PeopleSoft Course ID 001958 Grading Basis GRD

This course is a survey of the neurological and chemical mechanisms which control behavior. Students will examine the brain and how it processes sensation, perception, cognition, movement, motivation, learning, memory and other behavioral processes of interest to psychologists. **Prerequisite(s):** Psychology majors: PSYC 211 or PSYC 213. Biology majors: Declared biology neuroscience concentration, PSYC 101 or PSYC 160, and MATH 220, MATH 229, MATH 285 or MATH 318.

PSYC 390. Psychology of Learning

Credits 3.00 PeopleSoft Course ID 005497 Grading Basis GRD

Basic principles of learning and conditioning with a consideration of extinction, reinforcement, generalization, discrimination, transfer, concept formation and verbal learning. **Prerequisite(s):** C- or better in PSYC 211 or PSYC 213.

PSYC 395. Comparative Animal Behavior

Cross listed with: BIO 395

Credits 3.00 PeopleSoft Course ID 004319 Grading Basis GRD

This course covers aspects of the development, function, and evolution of the behavior of nonhuman animals. Topics covered include intraspecies communication, feeding, aggression, territoriality, reproductive behavior, and social behavior. **Prerequisite(s):** Psychology majors: A "C-" or better in PSYC 211 or PSYC 213. Biology and biotechnology majors: BIO 124 or BIO 250/BIO 250L, and one of the following (with a "C-" or better): MATH 205, MATH 220, MATH 231, MATH 235, MATH 285, MATH 318.

PSYC 400. Advanced Topics in Psychology

Credits 1.00 - 3.00 PeopleSoft Course ID 008027 Grading Basis GRD

Exploration of a significant psychological topic in depth. The topics for each semester will be announced in the Schedule of Classes. **Prerequisite(s):** One SS content course and one NS content course.

PSYC 401. Peer Advising

Credits 2.00 PeopleSoft Course ID 003578 Grading Basis OPT

Supervised practicum in academic and career development and peer advising. May be taken twice for up to four credit hours toward the psychology major (400-level elective). **Prerequisite(s):** PSYC 302 at least one SS content course and one NS content course, and permission of the instructor.

PSYC 402. Independent Study in Psychology

Credits 1.00 - 4.00 PeopleSoft Course ID 006559 Grading Basis GRD

An opportunity to apply classroom learning to practical problems and to expand the scope of knowledge in psychology to areas not emphasized in the coursework we offer. May include service learning, internship, directed readings, serving as a teaching assistant, or a combination of these activities.

Prerequisite(s): PSYC 211 or PSYC 213 and a written plan for the directed study must be submitted to the department head for approval one week prior to registration.

PSYC 403. Independent Research in Psychology

Credits 1.00 - 4.00 PeopleSoft Course ID 013487 Grading Basis GRD

An advanced opportunity to conduct research with a faculty member where students apply their knowledge of Psychology to a specific research project or area. Students may work individually with the instructor or as part of a team that includes several students. Student projects include the development of an evaluated product (e.g., poster presentation, presentation). Specific requirements of project are determined by the instructor. **Prerequisite(s):** PSYC 211 or PSYC 213 and a written plan for the directed study must be submitted to the department head for approval one week prior to registration.

PSYC 410. Psychology of the Workplace

Credits 3.00 PeopleSoft Course ID 006432 Grading Basis GRD

This course is a survey of the applications of psychological principles in the workplace. Emphasis is on topics such as research and methods, personnel decisions, training, attitudes, motivation, leadership, teams, and sociocultural issues in the workplace. Other topics of current interest will also be covered. Course will fulfill sociocultural awareness requirement. **Prerequisite(s):** One SS content course and one NS content course.

PSYC 415. Forensic Psychology

Credits 3.00 PeopleSoft Course ID 003273 Grading Basis OPT

The application of psychological principles and techniques to the law, the criminal justice system, law enforcement and criminal behavior. **Prerequisite(s):** PSYC 335

PSYC 420. Advanced Psychological Statistics

Credits 3.00 PeopleSoft Course ID 011734 Grading Basis GRD

This course presents advanced univariate and multivariate statistical techniques that psychology students need for reading research articles and conducting psychological research. **Prerequisite(s):** One SS content course and one NS content course.

PSYC 425. School Psychology

Credits 3.00 PeopleSoft Course ID 008511 Grading Basis GRD

Applications of psychological principles in school settings, including roles and activities of school psychologists, standards, trends, and issues of treatment and evaluation. **Prerequisite(s):** One SS content course and one NS content course.

PSYC 427. Tests and Measurements

Credits 3.00 PeopleSoft Course ID 007729 Grading Basis GRD

Standardized psychological tests of mental ability, achievement, aptitude and personality with a review of statistical procedures necessary for interpretation of test results. **Prerequisite(s):** One SS content course and one NS content course.

PSYC 428. Educational Psychology

Credits 3.00 PeopleSoft Course ID 011008 Grading Basis GRD

The application of the basic psychological principles of development, learning, cognition, measurement, and social interactions to educational settings. This course examines how psychological theory and research impacts the teaching of reading, writing, science, and mathematics. Students may not count both

PSYC 270 and 428 for psychology major credit. **Prerequisite(s):** *One SS content course and one NS content course.*

PSYC 430. Clinical Psychology

Credits 3.00 PeopleSoft Course ID 005369 Grading Basis GRD

An introduction to the field of clinical psychology including a review of the major theoretical models, psychometrics, psychiatric diagnosis and treatment strategies. **Prerequisite(s):** *PSYC 335 and one NS content course.*

PSYC 435. Community Psychology

Credits 3.00 PeopleSoft Course ID 001621 Grading Basis GRD

Focus on emerging trends and models in the application of psychology to community, stress prevention programs, human resources and change.

Prerequisite(s): *One SS content course and one NS content course are the prerequisites.*

PSYC 450. Psychology of Child Abuse and Neglect

Credits 3.00 PeopleSoft Course ID 007010 Grading Basis GRD

Review of current psychological literature on child abuse and neglect including identification, etiology, treatment, prevention and legal aspects. Family violence issues are also discussed. **Prerequisite(s):** *One SS content course and one NS content course.*

PSYC 452. Child Psychopathology

Credits 3.00 PeopleSoft Course ID 003066 Grading Basis GRD

The causes, symptoms and classification of childhood psychological disorders.

Prerequisite(s): *PSYC 335 or PSYC 365.*

PSYC 460. Community Psychology Within Developing Societies

Credits 3.00 PeopleSoft Course ID 011733 Grading Basis GRD

This course will apply psychology to a critical examination of developing societies around the world. Topics include sociocultural and international contexts, privilege, power, oppressing, terrorism, population growth, and diversity. Consideration is given to developmental and societal determinants of prejudice, discrimination, and inequity. Course meets sociocultural requirement for the psychology major. **Prerequisite(s):** *One SS content course and one NS content course.*

PSYC 461. Advanced Study Abroad in Psychology

Credits 1.00-4.00 PeopleSoft Course ID 014198 Grading Basis GRD

This course involves a study abroad experience including advanced content and application of psychology skills and knowledge in a particular cultural context. Specific content varies based on study abroad location and content focus of the course. Some sections of the course fulfill the Sociocultural Awareness requirement for the psychology major. **Prerequisite(s):** *One Natural Science core course and one Social Science core course in Psychology; permission of the instructor.*

PSYC 475. Psychology of Adulthood

Credits 3.00 PeopleSoft Course ID 003496 Grading Basis GRD

The physical, social and psychological factors faced by adults and their progression through the life span. **Prerequisite(s):** *One SS content course and one NS content course.*

PSYC 480. Applied Behavior Analysis

Credits 3.00 PeopleSoft Course ID 011731 Grading Basis GRD

This course focuses on how environmental events influence behavior, and behavior analytic strategies by which behavior may be changed. The emphasis of the course is on the knowledge and skills necessary to plan, develop, and implement interventions for behavior problems in a variety of setting including, but not limited to, business and industry, education, and health and human services. **Prerequisite(s):** *PSYC 180 and PSYC 390.*

PSYC 492. History of Psychology

Credits 3.00 PeopleSoft Course ID 008589 Grading Basis GRD

The history of psychology as reflected through the individuals, theories and experimental investigation of the discipline. Special emphasis is placed upon relating the current state of psychology to its historical development.

Prerequisite(s): *Must complete at least two courses each from social science and natural science core.*

PSYC 493. Laboratory in Psychology

Credits 3.00 PeopleSoft Course ID 007480 Grading Basis GRD

A research course designed by a faculty member that studies a particular topic. Topics will change from semester to semester. Students will be guided in a group through a research experience that would include library research of the topic, design of an experiment, gathering and analyzing the data and writing the results. The course meets the requirement as a capstone course or as a psychology elective. Only 3 credit hours of the course can be used for the psychology major. **Prerequisite(s):** *Must complete at least two courses each from social science and natural science core.*

PSYC 495. Field Placement in Psychology

Credits 4.00 PeopleSoft Course ID 006628 Grading Basis GRD

Supervised practicum in a counseling, industrial or human service agency. Orientation to agency's service, policies, personnel and professional ethics is provided. The course meets the requirement as a capstone course or as a psychology elective. **Prerequisite:** At least two Social Science content courses and two Natural Science content courses. Approval from adviser, course coordinator and department head required one month prior to registration. (Guidelines available in the department office). **Prerequisite(s):** *PSYC 211 and Junior or Senior standing*

PSYC 497. Senior Seminar

Credits 3.00 PeopleSoft Course ID 002527 Grading Basis GRD

A seminar course that will require students to integrate theories, research and/or methods from several areas of psychology and/or related disciplines. Topics will vary from semester to semester. May be taken as a capstone course or psychology elective. Up to six credit hours can be used in the psychology major. **Prerequisite(s):** *Must complete at least two courses each from social science and natural science core.*

PSYC 499A. Honors

Credits 2.00 PeopleSoft Course ID 009991 Grading Basis GRD

PSYC 499B. Honors

Credits 2.00 PeopleSoft Course ID 006490 Grading Basis GRD

PSYC 499C. Honors

Credits 2.00 PeopleSoft Course ID 002789 Grading Basis GRD

Public Policy and Administration

PPA 200. Introduction to Public Policy

Credits 3.00 PeopleSoft Course ID 011941 Grading Basis GRD

The course introduces students to the nature, dynamics and substance of public policy. Selected policy issues in the United States will be examined through the use of case studies. Foreign and global influences on U.S. policy-making will also be analyzed. Issues will vary across course sections over time.

PPA 265. Public Administration

Credits 3.00 PeopleSoft Course ID 007741 Grading Basis GRD

An introductory survey of the principles, functions and processes of public administration with specific emphasis on the political aspects and environment of bureaucracies, and the how and why of policy-making within an administrative system. Organizational structure, personnel, budgeting, public relations and government values, traditions, and objectives are analyzed.

PPA 359. Policy Analysis

Credits 3.00 PeopleSoft Course ID 011942 Grading Basis GRD

Study of public policy analysis. Delivers to students rational and alternative techniques for analyzing public policy while providing them opportunities to develop analytical skills. **Prerequisite(s):** PPA 200.

PPA 381. Budgetary Process

Credits 3.00 PeopleSoft Course ID 001762 Grading Basis OPT

An examination of the political planning and strategies of Congress and federal agencies in the budgetary process; politics of budgetary reform; state and local budgetary politics; and intergovernmental impacts on budgeting.

Prerequisite(s): Junior standing, PPA 265

PPA 412. Seminar in Intergovernmental Relations

Credits 3.00 PeopleSoft Course ID 011597 Grading Basis GRD

Study of the relations between the several levels of government in the United States. Political, fiscal, legal, regulatory and administrative relations as they have evolved within federal and state constitutional frameworks will be examined. **Prerequisite(s):** Junior standing and PPA 265

PPA 415. Legal Environment of Public Administration

Credits 3.00 PeopleSoft Course ID 008836 Grading Basis OPT

Examination of the basic constitutional framework of American public administration. Examines legal constraints imposed on public administrators by law and judicial oversight. Emphasis placed on legal issues affecting public employees. Also examines the basics of public procurement law.

Prerequisite(s): PPA 265

PPA 420. Public Management

Credits 4.00 PeopleSoft Course ID 004730 Grading Basis GRD

Study of the management of public agencies from the executive viewpoint. Management control of public agencies will be explored including establishment of goals, policies, organizational structure and output of services. Case studies illustrate administrative behavior and managerial operations in local, regional, state and federal agencies. Does not count as part of the political science major or minor. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** PPA 265, POSC 295 and senior standing.

PPA 441. Stability and Recovery Operations

Cross listed with: PUAD 541

Credits 3.00 PeopleSoft Course ID 014160 Grading Basis GRD

A study of policies and practices in stability and recovery operations. Conflict and post-conflict zones motivate international and domestic efforts to promote security, humanitarian assistance, economic stabilization and development, the rule of law, and participatory governance. This course develops management and policy design skills relevant to the pursuit of this complex agenda via case studies at the international, national and organizational levels. **Prerequisite(s):** PPA 200 and PPA 265.

PPA 460. Regionalism and Urban Management

Cross listed with: PUAD 560

Credits 3.00 PeopleSoft Course ID 012413 Grading Basis GRD

A study of the problems and management of urbanization and inter-jurisdictional externalities from a regional perspective. Regionalism will be examined as an approach to solve these problems. **Prerequisite(s):** PPA 200

PPA 461. Education and Social Policy

Credits 3.00 PeopleSoft Course ID 012414 Grading Basis GRD

A study of the development and implementation of education policy in the United States at the national, state, and local levels. Students will be introduced to major issues in contemporary education policy and the evaluation of alternative policies advanced by subgroups of the population. Educational

equity and its links to social and economic goals will be examined.

Prerequisite(s): PPA 200.

PPA 462. Social Welfare and Local Government Policy

Credits 3.00 PeopleSoft Course ID 012415 Grading Basis GRD

A study of the interaction of social welfare policy and local governance in theory and in practice. Students examine state and local government and community-based responses to urban problems from a policy and management perspective. Particular attention is paid to interagency and community collaboration as a way to enhance social service delivery. **Prerequisite(s):** PPA 200.

PPA 469. Philanthropy and Volunteerism

Credits 3.00 PeopleSoft Course ID 011933 Grading Basis GRD

An examination of the role of philanthropy and volunteerism in the nonprofit sector in the United States and globally. Topics discussed include: strategic giving; components of fundraising management and planning; volunteerism as a resource for organizations; board and staff responsibilities in resource acquisition; and monitoring and performance assessment. **Prerequisite(s):** PPA 265

PPA 470. Nonprofit Management and Leadership

Credits 3.00 PeopleSoft Course ID 013312 Grading Basis GRD

This course is designed to introduce students to the fundamentals of governance, accountability, trusteeship, and executive leadership in nonprofit sector organizations. The course will examine critically the principal models, processes, and practices used in managing nonprofit organizations and the relationships between the governing boards and executive leaders of such organizations. **Prerequisite(s):** PPA 265

PPA 471. Financial Management for Nonprofit Organizations

Credits 3.00 PeopleSoft Course ID 012243 Grading Basis GRD

An examination of the tools needed for an executive to understand and to supervise the financial functions in a nonprofit organization. Analyzes strategies used to manage resources in a nonprofit. Explores the finances of nonprofit groups through several case studies and discusses cost accounting techniques and managerial approaches useful to nonprofit organizations. **Prerequisite:** PPA 265. **Prerequisite(s):** PPA 265

PPA 472. Contract Management

Credits 3.00 PeopleSoft Course ID 013364 Grading Basis GRD

The purpose of this course is to provide a broad overview of the theory behind and practical application of contract management. As agencies across government (federal, state, and local) expand the use of contracting billions of taxpayer dollars are transferred into the private sector to conduct public business. This trend is not going away; therefore it is essential that public administrators be effective at managing and overseeing contracts.

Prerequisite(s): PPA 265.

PPA 473. Economic and Community Development

Cross listed with: PUAD 573

Credits 3.00 PeopleSoft Course ID 012244 Grading Basis GRD

Study of the theory and practice of economic development and community planning. Topics include human capital development, infrastructure development, regionalism, public-private partnerships.

PPA 475. Grant Writing and Project Management

Credits 3.00 PeopleSoft Course ID 013811 Grading Basis GRD

An examination of the practical skills needed for writing successful grant proposals as well as for carrying out grant-funded projects. Proposal development features include needs assessments, work plans, and evaluation programs. The foundations of project management examined include staffing,

workflow and expense monitoring, stakeholder relationships and demonstrating results. Prerequisite: *PPA 265* **Prerequisite(s):** *PPA 265*

PPA 482. Special Topics in Public Policy

Credits 3.00 PeopleSoft Course ID *013812*

The course will examine a special topic in public policy. The course may be repeated for credit with a change in the subject matter offered. **Prerequisite(s):** *PPA 265*.

PPA 483. Special Topics in Public Management

Credits 3.00 PeopleSoft Course ID *003363* Grading Basis *GRD*

The course will examine a special topic in public and/or nonprofit management. The course may be repeated for credit with a change in the subject matter offered. **Prerequisite(s):** *PPA 265*

PPA 484. Environmental Regulatory Policy and Politics

Credits 3.00 PeopleSoft Course ID *012671* Grading Basis *GRD*

A study of environmental politics and the policies that environmental advocacy has produced. Topics include the dynamics of policy construction, various substantive policy issues and the prospects for environmental justice and sustainability. **Prerequisite(s):** *PPA 200*.

PPA 485. Governance for Environmental Sustainability

Credits 3.00 PeopleSoft Course ID *014610* Grading Basis *GRD*

This course is an examination of the collaborative management necessary to address complex environmental sustainability issues facing communities at the local, state and national levels. Topics covered include systems thinking, interest-based negotiation, stakeholder analysis and environmental conflict resolution. **Prerequisite(s):** *PPA 265* or *permission of the instructor*.

PPA 492. Senior Seminar in Public Policy

Credits 4.00 PeopleSoft Course ID *011943* Grading Basis *GRD*

This research-oriented seminar provides an overview of public policy studies and the different approaches to research in this field. A major research project will strengthen the research, information access and lifelong learning capacities of the student. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** *Senior standing, POSC 295, and PPA 359*.

PPA 494. Internship in Public Policy

Credits 4.00 PeopleSoft Course ID *013845*

Provides students with opportunities for experiential learning in organizations engaged with public policy formulation and analysis. A research paper related to the internship is required. **Prerequisite(s):** *Junior or senior standing; 15 hours of Public Policy and Administration courses and permission of the instructor*.

PPA 496. Internship in Public Management

Credits 4.00 PeopleSoft Course ID *002210* Grading Basis *GRD*

Provides students with opportunities for experiential learning in a governmental or nonprofit organization. A research paper and a presentation based on the experience are required. **Prerequisite(s):** *Junior or Senior standing, 15 hours of PPA courses and permission of the instructor*.

PPA 496W. Public Management Internship in Washington

Credits 6.00 PeopleSoft Course ID *013592* Grading Basis *GRD*

This course provides opportunities for experiential learning in Washington, D.C. in public and nonprofit organizations. Requirements include 360 internship hours, a research paper related to the internship, a career report, and regular meetings with the supervising professor. **Prerequisite(s):** *Junior or Senior standing, 15 credits of relevant coursework and successful application to the Washington Semester Program*. *No more than four semester hours in any combination of internships can be counted towards the major.

Religion

REL 101. Religions of the World [C2HQC]

Credits 3.00 PeopleSoft Course ID *003075* Grading Basis *GRD*

An investigation of the world's major religions which will give attention to their origin, history, mythology and doctrines. May be used for general education credit.

REL 101H. Religions of the World - Honors [C2HQC]

Credits 3.00 PeopleSoft Course ID *003056* Grading Basis *GRD*

An investigation of the world's major religions which will give attention to their origin, history, mythology and doctrines. May be used for general education credit. **Prerequisite(s):** *Honors Students*

REL 102. Religion, Spirituality and the Meaning of Life [C2HQC]

Credits 3.00 PeopleSoft Course ID *004581* Grading Basis *GRD*

Where do we come from, and what is our place in the universe? What gives life happiness, purpose and meaning? How can we make sense of religious diversity, and how can we live well together in the midst of our differences? This course is a cross-cultural introduction to some of the ways people across the world have asked, answered and lived out these questions.

REL 103. Introductory Topics in Religion and Theology

Credits 1.00-6.00 PeopleSoft Course ID *014241* Grading Basis *NON*

Course on various topics in religious studies and/or theological studies. May be taken multiple times for credit.

REL 200. Exploring Religion

Credits 3.00 PeopleSoft Course ID *002077* Grading Basis *GRD*

This course will provide an introduction to some of the most influential thinkers, common methodologies, important debates and key concepts in the academic study of religion. The course will also consider recent challenges to this field of study. Emphasis will be on applying insights to real-world examples. **Prerequisite(s):** *REL 101*.

REL 201. Introduction to Hebrew Bible/Old Testament

Credits 3.00 PeopleSoft Course ID *007471* Grading Basis *GRD*

A study of selected texts in the Hebrew Bible or Old Testament using the methods of biblical studies, which examines texts in their original historical settings. No prior familiarity with the Bible is needed. Includes introductions to religious texts and cultures in ancient Egypt, Mesopotamia, and the Levant. We will also consider how contemporary readers use the Bible to support a range of policy issues and social platforms as we reflect on how a biblical studies approach might inform these positions.

REL 202. Introduction to the New Testament

Credits 3.00 PeopleSoft Course ID *002935* Grading Basis *GRD*

This course discusses the literature of the New Testament in light of historical, social and religious conditions from which it emerged. Particular attention is given to historical issues related to Jesus and the origins of Christianity.

REL 210. Religion in America

Credits 3.00 PeopleSoft Course ID *013432*

The purpose of this course is to offer students the opportunity to explore the broad contours of the intersection of religion with other important facets of American society, such as politics and law, civic space and social activism, social identities, intellectual life, and the arts and media. It will consider the relationship of religion to the constructing of an American identity rooted in ideas of pluralism, tolerance, equality, freedom of conscience, democracy and secularism.

REL 218. Philosophy of Religion

Cross listed with: *PHIL 218*

Credits 3.00 PeopleSoft Course ID *009636* Grading Basis *GRD*

An intensive examination of religion from the standpoint of philosophical thinking with particular emphasis on the way philosophers view such problems as the existence of God, evil, immortality, religious language, etc.

Prerequisite(s): *PHIL 101 or permission of the instructor.*

REL 250. Islamic Religious Traditions

Credits 3.00 PeopleSoft Course ID 011617 Grading Basis GRD

What constitutes Islam and how has it been defined throughout history? Who represents and speaks for Islam? How have we come to our Islamic studies archive and how does it impact how we view Islam? Students will discover the different ways Muslims and non-Muslims have answered these questions, in different places, times and social contexts. Based on the most recent research and original source material, the course will cover major themes of Islamic religious thought including the Qur'an and its interpretation, the intellectual history of Islam, Sufism, Islamic law, and Muslim reform and revivalism. Students will explore how these components have manifested in diverse cultures throughout Islam's history. In addition to gaining a solid understanding of the problems associated with the study of Islam, successful completion of this course should also equip students with the tools required to analyze broader theoretical issues pertinent to the study of religion. A further goal of this course is to provide a strong theoretical foundation in religious studies so that students are able to think and speak about religion in an informed and insightful manner. The scope of this course is not limited to Islam, as the example of Islam will be used as a case study to wrestle with broader intellectual issues relating to the intersection among religion, history and politics.

REL 280. Religion and Science

Credits 3.00 PeopleSoft Course ID 011598 Grading Basis GRD

This course will provide an historical survey of the relationship between religion and the sciences; offer overviews of scientific and theological theory; examine the development of theory formation; focus on issues in astronomy, physics, and biology; explore the ethical implications of scientific and religious theories; and trace developments.

REL 288. Introduction to Buddhism

Credits 3.00 PeopleSoft Course ID 013846 Grading Basis GRD

This course explores the historical origins of Buddhism, the central tenets of Buddhist thought, the major meditative practices Buddhists employ, and the relationship between meditation and social action in contemporary Buddhist communities.

REL 300. Selected Topics in Religion

Credits 3.00 PeopleSoft Course ID 006080 Grading Basis GRD

Selected topics in religion are studied in depth. See MyMadison for current topic. Course may be repeated for credit when content changes.

REL 304. Art, Religion and Identity in Medieval Sicily

Credits 3.00 PeopleSoft Course ID 014595 Grading Basis GRD

This course will explore Sicily's rich medieval history through the lenses of religion, art and identity. Bringing together primary source texts, contemporary theory and material evidence, we will analyze how the island's Jews, Christians and Muslims competed over a shared intellectual, artistic and material heritage to construct their identities. Taught on-site in Palermo, Sicily.

REL 306. Gender and Sexuality in Islam

Credits 3.00 PeopleSoft Course ID 013146 Grading Basis GRD

This course investigates how particular gender roles, identities and relationships become signified as Islamic, and the ways in which Muslim women continually re-negotiate the boundaries of gender in living an authentic religious life. Topics will include Qur'anic revelations, the formation of Islamic

jurisprudence, sexual ethics and representations of Muslim women in colonial discourse, as well as the role of women in ritual practice and feminist movements.

REL 307. Knowledge and Identity in Islam

Credits 3.00 PeopleSoft Course ID 014423 Grading Basis GRD

This course will explore how careful attention to questions of knowledge and identity can illuminate the complexity of Muslim perspectives and societies. Philosophers and poets, esotericists and encyclopedists, artists and artisans, reformers and renunciants: Muslims from Detroit to Damascus have wielded a vast array of discourses and practices to fashion themselves and the world(s) around them. Throughout the course, students will investigate these ideas and strategies as dynamic and contingent human products, inextricable from urgent social and political concerns. Students will analyze how knowledge is shaped by relationships of power and molded by institutions, values and practices that privilege some individuals and exclude others. At the same time, students will examine how knowledge production can reorient relationships and identities, opening up new possibilities for action.

REL 310. (Re)thinking Order and Chaos: An Introduction to Hinduism

Credits 3.00 PeopleSoft Course ID 005192 Grading Basis GRD

This course introduces Hinduism through the concepts of order (dharma), chaos or disorder (non-dharma), and ethic of responsibility (karma), and their relationships to the pursuits of pleasure and material well being and the quest for liberation. It makes sense of chaos and discovers the lurking irrationality of order, and thereby suggests a creative role of chaos in order. This course also challenges the category of religion and the universalism associated with Western religious mythologies.

REL 313. Classical Chinese Thought

Credits 3.00 PeopleSoft Course ID 013864

This course is a introduction to early Chinese thought. The word "thought" is used instead of "philosophy" or "religion" because the Chinese intellectual tradition did not distinguish between philosophy and religion. We will examine how philosophical, religious, and literary elements are all uniquely deployed in texts such as the Analects of Confucius, the Dao De Jing, and other classics. Our approach will involve analysis of language, arguments, cultural context, and authorial intent.

REL 314. Gandhi and the Other 9/11

Credits 3.00 PeopleSoft Course ID 011600 Grading Basis GRD

Mahatma Gandhi is unique as a social theorist, a moral and spiritual philosopher, and a social and political activist. He serves as a bridge from post-modern to modern and pre-modern thought. His experience transcends boundaries of culture, geography, religion and politics. In this course students explore the ideas and the story of Gandhi to reflect upon the issues facing the modern world, with an emphasis on the modern nonviolent movement that he launched on 9/11.

REL 315. Women and Religion

Credits 3.00 PeopleSoft Course ID 002147 Grading Basis GRD

Students will explore the diverse relationships between women and the world's major religions (Hinduism, Buddhism, Judaism, Christianity and Islam), both in the past and today. Topics will include women's roles, rights, practices, bodies, sexualities, clothing, representations and more. Feminist approaches for critiquing religious histories, texts and traditions will also be considered.

REL 317. Introduction to Daoism

Credits 3.00 PeopleSoft Course ID 013838

Beginning with the earliest classics and continuing to the present, the course examines Daoism from historical, literary, philosophical and religious

perspectives. It explores the difficulties categorizing Daoism as a "philosophy" or "religion," and how it still informs political, philosophical and religious thought in China. First-person exercises in and out of class will yield a holistic and lived understanding of the Daoist tradition.

REL 320. Judaism

Credits 3.00 PeopleSoft Course ID 005930 Grading Basis GRD

An examination of the beliefs, practices and historical development of the various forms of Judaism represented in America today: Orthodox, Reform, Conservative and Reconstructionist.

REL 322. Sociology of Religion

Cross listed with: *SOCI 322*

Credits 3.00 PeopleSoft Course ID 001565 Grading Basis GRD

This course is a sociological analysis of the nature, function, and structure of religion. Survey of the relationship between religion and society: the social nature of religious phenomena, the interaction between religious beliefs and practices and other arenas of secular societies, the social functions of religion, and the way religion changes and is changed by secular society.

REL 323. Comparative Ethics East and West

Cross listed with: *PHIL 323*

Credits 3.00 PeopleSoft Course ID 013840 Grading Basis GRD

In an increasingly globalized world, ethical decisions often involve considering diverse systems of beliefs about how one ought to live. In this course, students will think about ethical questions from cross-cultural perspectives, including perspectives of Buddhism, Confucianism, Aristotelianism and utilitarianism. By analyzing arguments made in Eastern and Western philosophical and religious traditions, students will begin to see similarities—such as the use of logical reasoning and the undesirability of pain—as well as fundamental differences. Case studies and examinations of contemporary issues make the course content relevant to the present day.

REL 324. Latinx and Latin American Christianity

Credits 3.00 PeopleSoft Course ID 014086 Grading Basis GRD

The election of Pope Francis to the papacy reflects the growing influence of Latin America upon world Christianity. This course will provide a historical and thematic overview of the changes in the history of Latin American Christianity. It moves chronologically and geographically, from colonial Latin America to Hispanic immigrant communities. Topics covered include race and colonialism, the Cuban Revolution, the Second Vatican Council, social justice and Christianity, the rise of Pentecostalism, labor movements and inequality, and U.S. Hispanic political influence.

REL 325. Catholicism in the Modern World

Credits 3.00 PeopleSoft Course ID 006033 Grading Basis GRD

Study of the variety of responses by contemporary Catholic theologians and philosophers to key elements in Christian doctrine and practice. Topics include Vatican II; scripture, tradition and modern scholarship; Jesus and Christology; contemporary Catholic spirituality; moral issues in the church; and ecumenism.

REL 330. Religions of Africa and the African Diaspora

Credits 3.00 PeopleSoft Course ID 004712 Grading Basis GRD

An examination of the character of religious traditions, beliefs and liturgical practices of African and African-Diaspora communities. Both primary (historical and anthropological) and secondary sources examined.

REL 332. Born Again Religion

Credits 3.00 PeopleSoft Course ID 012700 Grading Basis GRD

Evangelical Protestantism has played a vital role in shaping American religious history. The religious and social allegiances of evangelicalism are quite diverse, however. Evangelicals also maintain a paradoxical relationship with American

society, functioning both as powerful insiders and vocal outsiders. This course is designed to introduce students to the history of evangelicalism, its religious patterns and its negotiations with contemporary American culture.

REL 333. Angels, Demons and Dreams in Ancient Judaism and Christianity

Credits 3.00 PeopleSoft Course ID 013721 Grading Basis GRD

This course will familiarize students with a broad range of early Jewish and Christian writings, found outside of the Jewish and Protestant Christian canon, that were held to be Scripture at the time of their production and reception ca. 300 B.C.E. - 200 C.E. Using a broad range of interdisciplinary methodologies drawn from biblical studies, students will study these Scriptures in the context of late Persian, Hellenistic and Roman cultures, as well as in light of archaeological findings.

REL 334. New Religious Movements

Credits 3.00 PeopleSoft Course ID 012425 Grading Basis GRD

America has proven to be fertile soil for the development of new religious traditions. It has encouraged religious pluralism, and has allowed hundreds of new communities to establish themselves as important elements of society. This course will consider some of the representative new religions in America by examining their histories, beliefs, and practices.

REL 336. African American Religion

Credits 3.00 PeopleSoft Course ID 012701 Grading Basis GRD

The purpose of this course is to familiarize the student with the broad contours of the African American religious experience, and its history, practices, and communities by examining the intersection of race and religion in America. Through the close reading of primary texts and increased familiarity with significant scholarly literature, students will gain a basic understanding of the fundamental categories in African American religion.

REL 339. Islamic Philosophy

Cross listed with: *PHIL 339*

Credits 3.00 PeopleSoft Course ID 014618 Grading Basis GRD

This course will explore a variety of philosophical perspectives from across the Islamic world, employing methodological tools from both philosophy and religious studies. Themes may include: What is knowledge and how is it acquired? What does it mean to be human? What is the relationship between reason and other human faculties? What is the nature of time and history? What do we *really* mean when we talk about God? Philosophers covered may include: al-Kindī (d. 873), Ibn Sīnā (d. 1037), Ibn 'Arabī (d. 1240), Mullā Ṣadrā (d. 1636), Muḥammad Iqbal (d. 1938) and Fatema Mernissi (d. 2015).

REL 340. Introduction to Christianity

Credits 3.00 PeopleSoft Course ID 008840 Grading Basis GRD

This course provides a broad survey of the Christian tradition, from its origins in the Mediterranean to its contemporary expressions in diverse communities. In addition to its historical development, the course will consider Christian belief, ritual, moral practice and social engagement. Major intellectual and theological traditions will be addressed through the study of foundational texts. Students will gain a working knowledge of major church communions as well as minor and marginalized movements.

REL 341. Early Christian Gospels: Origins, History and Conflict

Credits 3.00 PeopleSoft Course ID 013453 Grading Basis GRD

Matthew, Mark, Luke and John are the familiar "canonical" gospels. In the early centuries of Christianity other gospels circulated: the Gospel of Peter, "Q", Infancy Gospels and the so-called Gnostic gospels. This course examines the origins of the canonical and non-canonical gospels, the historical and theological factors at work in the emergence of the canonical gospels to a

position of primacy, and the struggles within early Christianity to define its authoritative tradition.

REL 342. The Historical Jesus Quest

Credits 3.00 PeopleSoft Course ID 010851 Grading Basis GRD

A study of the attempts of scholarship since the Enlightenment to discover the so-called historical Jesus. Includes discussion of historiographical problems raised in past and present scholarly "quests" for the historical Jesus, analysis of the relationship between memory and the Jesus traditions, and practice in situating the Gospel materials in the social and political context of ancient Roman Palestine.

REL 343. Paul and the Origins of Christianity

Credits 3.00 PeopleSoft Course ID 013594 Grading Basis GRD

Some scholars argue that the Apostle Paul was the "real" founder of Christianity, others that he was the faithful interpreter of the Jesus traditions to the Greco-Roman world. After reconstructing the historical course of Paul's life and journeys from the available sources, the course will analyze selected Pauline epistles, sent to early Christian communities, in order to reconstruct his teaching and ethics and to assess his significance for the origins of Christianity.

REL 344. Gospel of John

Credits 3.00 PeopleSoft Course ID 014593 Grading Basis GRD

Of the four New Testament gospels, the Gospel of John is the most mystical, philosophical and, in some respects, the most challenging to understand and interpret. It is both a deeply Jewish work and a deeply Christian work. It is a textual encounter zone between ancient Judaism and emergent Christianity. This course focuses on a close reading of the entire Gospel that situates it within the wider narrative world of ancient Judaism and observes its re-centering of that narrative world around the figure of Jesus.

REL 348. Christianity in Global Context

Credits 3.00 PeopleSoft Course ID 012954 Grading Basis GRD

Christianity plays a vital role in many societies around the world. Though often treated as a mostly western or European religion, it was in fact a global religion first and foremost. This course examines Christianity from that global perspective. What does Christianity look like around the world? How have indigenous cultures fashioned their own versions of Christianity in the modern world? Is there unity in the diversity of these global Christianities?

REL 350. Islamic Law and Society

Credits 3.00 PeopleSoft Course ID 012416

This course aims to introduce students to the study of Islamic law, the all-embracing sacred law of Islam. In this course we will consider various facets of the historical, doctrinal, institutional and social complexity of Islamic law in the classical and modern periods. Topics to be discussed include medieval Islamic legal theory, gender and sexuality, the just war, and the issue of Islamic law and universal human rights, particularly as they pertain to women.

REL 363. Apocalypticism, Religious Terrorism and Peace

Cross listed with: IA 363

Credits 3.00 PeopleSoft Course ID 012677 Grading Basis GRD

This course traces apocalypticism from its ancient Jewish and Christian roots to its contemporary manifestations in religious groups around the world. Since apocalypticism is a worldview that cuts across religious traditions, the course covers a variety of religious groups. The last half of the course focuses on the complex relationships between apocalyptic thinking and religious terrorism and entails an independent research project.

REL 365. Religion and Film

Credits 3.00 PeopleSoft Course ID 013998 Grading Basis GRD

In this course, students will explore the appearance of the major world religions (Christianity, Judaism, Islam, Buddhism and Hinduism) as well as religious themes (such as redemption or the afterlife) in the medium of film. Students will learn to critique cinematic representations and misrepresentations of religion and to analyze their impact on viewers, as well as to consider how films may provide rituals and other experiences that serve a religious function.

REL 366. Religion, Animals and the Environment

Cross listed with: ENVT 366

Credits 3.00 PeopleSoft Course ID 014080 Grading Basis GRD

This course analyzes the ways in which various religions, especially Judaism and Christianity, understand the relationship of human beings to the environment and non-human animals. We will explore how religious worldviews translate into human impact on the non-human biosphere. Given the global reach of American environmental policies and lifestyles, and the prominent role that biblical interpretation has played in shaping American attitudes and policy, special emphasis will be placed on historical interpretations of the Bible, ranging from human dominionism to human responsibility in caring for the earth, its creatures and its ecosystems. The course explores the complexities involved in using religious positions, interpretations of biblical texts and apocalyptic arguments to inform both environmentalism and policy debates related to the environment. Students will gain a basic introduction to methods of biblical scholarship and familiarity with the general state of scientific consensus on environmental challenges.

REL 371. Religion and Disability

Credits 3.00 PeopleSoft Course ID 014228 Grading Basis GRD

What is disability and how is it constructed? What have the major world religions, on their own and in conversation, decided is 'normal' and what they have decided is 'other?' How do they view and treat those individuals/groups they have deemed disabled? How do people with disabilities create their own meaning within and beyond their own religion? This course will investigate the nature of disability in five of the world's religions (Hinduism, Buddhism, Judaism, Christianity and Islam). While we will become familiar with how disability intersects with and across each of these religions, the heart of this course will be deep explorations of specific case studies as well as personal reflections on the students' and others' intersectional identities in the context of various communities.

REL 372. Religion and Medicine, East and West

Credits 3.00 PeopleSoft Course ID 014087 Grading Basis GRD

What is the relationship between religion and medicine? How has the idea of healing been influenced by religious faith, historically and philosophically? This course explores a broad range of issues at the intersection of religion and science, from the question of what counts as "proof" to the existential crises that sickness can provoke. Historical perspective is balanced with case studies and current events to show how theoretical concerns affect real-world scenarios. Fulfills the College of Arts and Letters writing-intensive requirement for the major.

REL 373. Race and Religion

Credits 3.00 PeopleSoft Course ID 014424 Grading Basis GRD

Both race and religion are interwoven into who we are and how we inhabit our various worlds, even if we don't think of these as important or relevant parts of our lives. This class will explore the complicated and long-standing intersection of these two concepts, wondering: What do they each mean? How have these terms functioned throughout history? How do race and religion interact? How has one informed or shaped our understanding of the other? When differing

racial and religious identities converge for individuals and communities, what happens? With the foundation provided by the course and the time together, students will also have the opportunity to explore their own various identities as well as a case study of the students' choosing that involves an intersection of race and religion.

REL 375. Nineteenth Century Philosophy and Theology

Cross listed with: *PHIL 375*

Credits 3.00 PeopleSoft Course ID 002827 Grading Basis GRD

A selected study of 19th-century philosophers and theologians with special attention to rationalism, romanticism and idealism. Views of Hegel, Schleiermacher, Ritschl, Marx and others are considered.

REL 377. Hermeneutics

Cross listed with: *PHIL 377*

Credits 3.00 PeopleSoft Course ID 012384 Grading Basis GRD

This course will examine the main features of hermeneutics with particular emphasis on its contemporary perspectives. Discussion will focus on such themes as human understanding and human finitude, the nature of history and tradition, linguisticity and textuality of experience. Readings may address Gadamer, Ricoeur, Schleiermacher, and Dilthey.

REL 383. The Global Refugee Crisis and Religion

Credits 3.00 PeopleSoft Course ID 014098 Grading Basis GRD

Focused on the contemporary refugee crisis, this course investigates the intersection of religion with human experiences of displacement, migration, resettlement, and welcome. We also analyze the place of religion in refugee policy debates as well as the role of faith-based organizations in refugee relief and resettlement.

REL 386. Topics in Buddhist Studies

Credits 3.00 PeopleSoft Course ID 012914 Grading Basis GRD

Study of major issues and thinkers in the Buddhist tradition from ancient times to the present. May be repeated for credit when course content changes.

REL 387. Buddhist Literature and Liberation

Credits 3.00 PeopleSoft Course ID 013999 Grading Basis GRD

Focused on the interpretation of Buddhist texts, this course explores how Buddhists have envisioned literary activity as part of a path to spiritual liberation. Students read and analyze a variety of literary genres, from hagiography to haiku; investigate the ritual dimensions of scribing and printing Buddhist scriptures; and apply contemplative disciplines to creative writing assignments.

REL 388. Tibetan Buddhism

Credits 3.00 PeopleSoft Course ID 013847

This course explores the teachings of Tibetan Buddhism as they are practiced and experienced in communities on the Tibetan Plateau. Student research projects investigate the globalization of Tibetan Buddhism, especially through the public life of the Dalai Lama, as well as Tibetan Buddhism's relationship to topics like nonviolence, compassion, mindfulness, interfaith dialogue, psychology and politics.

REL 410. Dharma/Adharma: Hindu Ethical Reasoning

Credits 3.00 PeopleSoft Course ID 011599 Grading Basis GRD

What values are advanced in Hindu religious and ethical teachings? How do Hindu texts and traditions define and teach the good life and virtuous living? Is moral responsibility conditioned by caste, class, gender or other socioeconomic factors? These are some of the questions that will be considered in this study on Hindu modes of moral reasoning. This course will also make sense of the structure of chaos (adharma) and the chaos of structure

(dharma) and thereby suggest that adharma might somewhat make more sense than dharma.

REL 440. Topics in Religion in America

Credits 3.00 PeopleSoft Course ID 007096 Grading Basis GRD

This course serves as a senior seminar (capstone) for majors in Religion, centered around the subject of Religion in America. As a capstone course, students will pursue their own advanced research projects after an initial, intensive introduction to the subject. Rotating topics include "Mormonism and American Culture" and "American Evangelicalism," as well as others.

REL 450. Religion and Society

Credits 3.00 PeopleSoft Course ID 002087 Grading Basis GRD

An advanced exploration of diverse ways in which one or more of the world's religions have engaged questions of significant social impact. Specific course themes vary by year and instructor. Original student research, writing and oral presentation are the centerpieces of this religion capstone course. Fulfills the College of Arts and Letters writing-intensive requirement for the major.

REL 460. Topics in Ancient Jewish and Early Christian Literature

Credits 3.00 PeopleSoft Course ID 000953 Grading Basis GRD

An in-depth examination, using critical academic methods, of the historical, literary, and cultural dimensions of selected texts from the literatures of Ancient Judaism and Early Christianity. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** *REL 201 or REL 202 or permission of the instructor.*

REL 488. Buddhism in the Modern World

Credits 3.00 PeopleSoft Course ID 014000 Grading Basis GRD

This capstone course in the study of religion applies knowledge of Buddhist thought and practice to contemporary global expressions of Buddhism. A key theme of the course is the tension between tradition and modernity in Buddhist communities, especially in light of post-colonialism and globalization. Specific course themes and content rotate by year. Original student research, writing and oral presentation are the centerpieces of this capstone experience. Fulfills the College of Arts and Letters writing-intensive requirement for the major.

REL 490. Special Studies in Religion

Credits 3.00 PeopleSoft Course ID 009310 Grading Basis GRD

This course is designed to give capable students the opportunity to complete independent study in religion under faculty supervision. May be repeated for credit. **Prerequisite(s):** *Permission of the department head.*

REL 493. Religion Course Assistantship

Credits 3.00 PeopleSoft Course ID 013500 Grading Basis GRD

Students participate as course assistants in religion. Assistantships provide students with a sense of what it is like to teach a religion course by allowing them to work closely with faculty members through different phases of course preparation, presentation and evaluation. Assistantships may also provide opportunities for student assistants to lead discussion and to help their peers review the material outside the classroom. **Prerequisite(s):** *Senior status or permission of the department head.*

REL 495. Religion Internship

Credits 3.00 PeopleSoft Course ID 013029 Grading Basis GRD

Gives the structured opportunity to gain practical knowledge and experience while serving the community. **Prerequisite(s):** *Philosophy and Religion Major or Minor (Religion Concentration), junior or senior standing.*

REL 499A. Honors Thesis

Credits 1.00 PeopleSoft Course ID 007203 Grading Basis GRD

An original research project for majors in the religion program who want to graduate with distinction.

REL 499B. Honors Thesis

Credits 3.00 PeopleSoft Course ID 000923 Grading Basis GRD

An original research project for majors in the religion program who want to graduate with distinction.

REL 499C. Honors Thesis

Credits 2.00 PeopleSoft Course ID 002093 Grading Basis GRD

Russian

RUS 101. Elementary Russian

Credits 3.00 - 4.00 PeopleSoft Course ID 007533 Grading Basis OPT

The fundamentals of Russian through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory.

RUS 102. Elementary Russian II

Credits 3.00 - 4.00 PeopleSoft Course ID 001085 Grading Basis GRD

The fundamentals of Russian through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. **Prerequisite(s):** RUS 101

RUS 111. Intensive Russian I

Credits 6.00 PeopleSoft Course ID 009864 Grading Basis GRD

The fundamentals of Russian through listening, speaking, reading and writing. The course is the equivalent of RUS 101-102.

RUS 212. Intensive Russian II

Credits 6.00 PeopleSoft Course ID 013389 Grading Basis GRD

The fundamentals of Russian through listening, speaking, reading and writing. The course is the equivalent of RUS 231-232. **Prerequisite(s):** RUS 102 or RUS 111 or sufficient score on the Foreign Language Placement Exam.

RUS 231. Intermediate Russian I

Credits 3.00 PeopleSoft Course ID 010371 Grading Basis GRD

A thorough review of grammar, vocabulary building, conversation, composition and reading. **Prerequisite(s):** RUS 102/RUS 111 or <250 on FLPE

RUS 232. Intermediate Russian

Credits 3.00 PeopleSoft Course ID 003779 Grading Basis GRD

A thorough review of grammar, vocabulary building, conversation, composition and reading. **Prerequisite(s):** RUS 231 or sufficient score on Foreign Language Placement Exam

RUS 300. Grammar and Communication

Credits 3.00 PeopleSoft Course ID 000986 Grading Basis GRD

Intensive training in grammatical structures and their application to oral and written communication. Instruction is in Russian. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** RUS 232 or RUS 212 or sufficient score on the Foreign Language Placement Exam.

RUS 308. Introduction to Russian Culture

Credits 3.00 PeopleSoft Course ID 001825 Grading Basis GRD

A study of Russian life and culture and the outstanding contributions of Russian-speaking peoples. Instruction is in English.

RUS 315. Russian Phonetics

Credits 3.00 PeopleSoft Course ID 000145 Grading Basis GRD

Intensive drill in Russian sounds and intonation patterns. Continued emphasis on conversation. Instruction is in Russian. **Prerequisite(s):** RUS 232 or equivalent.

RUS 320. Russian Oral and Written Communication

Credits 3.00 PeopleSoft Course ID 001187 Grading Basis GRD

Intensive training in the use of modern, everyday Russian with emphasis on conversation and composition. Readings in Russian will provide a context for discussion and writing. **Prerequisite(s):** RUS 300

RUS 400. Advanced Conversation

Credits 3.00 PeopleSoft Course ID 006750 Grading Basis GRD

Discussions deal with topics of current interest. Instruction is in Russian.

Prerequisite(s): RUS 300 or equivalent.

RUS 438. Studies in Russian Literature

Cross listed with: ENG 438

Credits 3.00 PeopleSoft Course ID 011076 Grading Basis GRD

A study of selected works of Russian Literature. Instruction is in English. May be repeated for credit when content varies.

RUS 446. Special Topics in Russian Literature

Credits 3.00 PeopleSoft Course ID 013138 Grading Basis GRD

Study of a particular topic in Russian literature. It may cover all or a specific Russian literature genre. Course may be repeated if content varies.

Prerequisite(s): RUS 300 or permission of the instructor.

RUS 447. Special Topics in Russian Civilization

Credits 3.00 PeopleSoft Course ID 013139 Grading Basis GRD

Study of a particular topic in the civilization and/or culture of Russia. Course may be repeated if content varies. **Prerequisite(s):** RUS 300 or permission of the instructor

RUS 448. Special Topics in Russian Linguistics

Credits 3.00 PeopleSoft Course ID 014091 Grading Basis GRD

Students will study a particular topic in Russian linguistics. Topics could include an introduction to Russian sociolinguistics or psycholinguistics. Course may be repeated if content varies. **Prerequisite(s):** RUS 300 or permission of the instructor.

RUS 490. Special Studies in Russian

Credits 1.00 - 4.00 PeopleSoft Course ID 001586 Grading Basis GRD

(Repeatable)

Allows students an opportunity to complete independent studies under faculty supervision.

RUS 499A. Honors Project

Credits 1.00 PeopleSoft Course ID 009291 Grading Basis GRD

This is a three semester course, offered as parts A, B, and C for 1, 3, 2 credits per semester.

RUS 499B. Honors Project

Credits 3.00 PeopleSoft Course ID 005131 Grading Basis GRD

This is a three semester course, offered as parts A, B, and C for 1, 3, 2 credits per semester.

RUS 499C. Honors Project

Credits 2.00 PeopleSoft Course ID 000133 Grading Basis GRD

This is a three semester course, offered as parts A, B, and C for 1, 3, 2 credits per semester.

School of Theatre and Dance

STAD 100. Theatre and Dance Colloquium

Credits 0.00 PeopleSoft Course ID 013501 Grading Basis CNC

Department colloquium; work in progress presented, viewed and discussed by student body, faculty and guests. Professionals in the field may hold master classes. May fulfill other purposes as needed. **Prerequisite(s):** School of Theatre and Dance majors only.

STAD 171. Performance Production

Credits 3.00 PeopleSoft Course ID 004350 Grading Basis GRD

An introduction to the methods of the production of scenery, properties, costumes, lighting, sound and performance management for theater and dance performance. Instruction in the skills required for the operation of lighting and sound equipment will be taught. Students are required to complete a main

stage running crew assignment as a component of this course. **Prerequisite(s):** *School of Theatre and Dance majors and minors and School of Music majors only.*

STAD 250. The Collaborative Artist: Sophomore Studio

Credits 3.00 PeopleSoft Course ID 013855 Grading Basis GRD

The course explores the creative and collaborative processes within the development of performance events. Emphasis is placed upon the role of the artist as a social and artistic force in society. Studio-based creative explorations along with the viewing and discussion of live and recorded performances are integral to the course in order for students to investigate, experience, and devise collaboratively within the context of various performance forms across multiple disciplines and cultures. **Prerequisite(s):** *School of Theatre and Dance majors only and sophomore standing.*

STAD 260. Season Planning and Management

Credits 1.00 - 2.00 PeopleSoft Course ID 014607 Grading Basis GRD

Season Planning and Management is a practice-based arts management course. Assignments, discussions and learning outcomes model a season-development process as might be employed at a professional regional theatre. As part of this course, students will join faculty and staff in a series of small seminar-style meetings to develop an upcoming theatre and dance season for the School of Theatre and Dance hosted in the Forbes Center for the Performing Arts. **Prerequisite(s):** *School of Theatre and Dance majors only and sophomore standing. Permission of instructor.*

STAD 303. Special Topics in Theatre and Dance

Credits 1.00-3.00 PeopleSoft Course ID 014380 Grading Basis GRD

Study of current topics and issues in performing arts. Emphasis on contemporary themes of immediate concern. **Prerequisite(s):** *Permission of instructor.*

STAD 322. Equity, Inclusion and Access in Education and Performance

Credits 3.00 PeopleSoft Course ID 014030 Grading Basis GRD

An exploration of practices in theatre and dance education and performance that support equity, inclusion and access. This course looks at the intersections of arts education, art-making and performance, applied theatre, and community engaged practice. **Prerequisite(s):** *School of Theatre and Dance majors only and sophomore standing.*

STAD 471. Stage Management

Credits 3.00 PeopleSoft Course ID 004715 Grading Basis GRD

Study and analysis of stage management. Consideration given to the methods and strategies for successful stage management for theater, dance and other performances. Emphasis on developing management and organizational skills.

Prerequisite(s): *STAD 171.*

Social Work

SOWK 287. Intro to Social Work

Credits 3.00 PeopleSoft Course ID 006012 Grading Basis GRD

Overview of social work as a profession with emphasis on various settings and diverse populations as distinguished by age, class, race, ethnicity, culture, spirituality, family structure, marital status, gender, gender identity, sex, sexual orientation, physical or mental ability, socio-economic status, and national origin and the implications to social work practice. Focuses on practical experiences designed to enable students to gain familiarity with the dynamics of the profession. **Corequisite(s):** *20 hours community service-learning.*

SOWK 288. Human Rights, Social, Economic and Environmental Justice

Credits 3.00 PeopleSoft Course ID 007458 Grading Basis GRD

The foundational realities of vulnerable people are introduced in this course through concepts of human rights; social, economic and environmental justice;

and diversity/inclusion. Processes that seek to reduce, ameliorate and/or alleviate injustices including advocacy action are explored.

SOWK 301. Workshops in Social Work

Credits 0.00 - 3.00 PeopleSoft Course ID 006598 Grading Basis CNC

Detailed study of a topic of interest in social work. May be repeated for credit.

SOWK 302. Workshops in Social Work

Credits 1.00 - 3.00 PeopleSoft Course ID 013258 Grading Basis GRD

Detailed study of a topic of interest in social work. May be repeated for credit.

SOWK 305. Social Work Research Methods

Credits 3.00 PeopleSoft Course ID 005058 Grading Basis GRD

Study of qualitative and quantitative methods in social work research. Demonstrating scientific and ethical research processes including formulation of research questions, selecting a design, collecting data, analysis and interpretation of data, and exposure to evaluation of practice. Diversity and inclusion are highlighted in the research process. **Prerequisite(s):** *MATH 220 or SOCI 231; SOWK 287; SOWK 288.*

SOWK 314. Rural Health: an Interprofessional Approach

Cross listed with: *HTH 314, IPE 314, NSG 314*

Credits 3.00 PeopleSoft Course ID 013642 Grading Basis GRD

Students study, observe and participate in interprofessional assessment, planning and delivery of community-based primary health care in partnership with residents and agencies of a host rural county. Learning activities will emphasize rural culture, rural health care and interprofessional practice.

SOWK 317. Skills for Generalist Social Work

Credits 3.00 PeopleSoft Course ID 003163 Grading Basis GRD

Developing self-awareness of students' own value and culture systems, differentiating between their own systems and those of clients, and how these differences impact on communication. Understanding of empathy, engagement, and other interpersonal skills. Developing skills in communication and interviewing within a strengths-based generalist framework with individuals, families, groups, and communities. **Prerequisite(s):** *SOWK 287, SOWK 288 or departmental permission. Corequisite(s):* *SOWK 320 and junior standing.*

SOWK 320. Human Behavior in the Social Environment

Credits 3.00 PeopleSoft Course ID 002929 Grading Basis GRD

This course presents theoretical frameworks of human behavior and the social environment at individual, family, group, organization and community system levels. Application of the frameworks to social work processes of engagement, assessment, intervention and evaluation is explored. Integrates and expands prerequisite knowledge in psychological and socio-cultural sciences related to the dimensions of diversity and difference in shaping human experience.

Prerequisite(s): *PSYC 101, PSYC 160, SOWK 287, and SOWK 288; and one of SOCI 101 or SOCI 110; and one of AAAD 200, ANTH 195, GEOG 200, GEOG 280, SOCI 336, or SOCI 354. Corequisite(s):* *SOWK 317.*

SOWK 325. Parent-Child Relationships Across the Lifespan

Cross listed with: *FAM 325*

Credits 3.00 PeopleSoft Course ID 001889 Grading Basis GRD

This course focuses on giving and receiving familial attention, care and support over the lifespan and across generations. Combines developmental and ecosystems frameworks to explore family life as the primary arena in which people learn and establish social behavior and interpersonal relationships, in conjunction with extrafamilial connections. **Prerequisite(s):** *For Family Studies Minors taking it as a FAM course: FAM 133 or SOCI 374. For Social Work Majors taking it as a SOWK course: SOWK 287 and SOWK 288.*

SOWK 327. Substance Use Interventions

Cross listed with: *FAM 327/GERN 327*

Credits 3.00 PeopleSoft Course ID 014227 Grading Basis GRD

Explore types, effects and prevalence of substance use in the U.S. Impacts of use on individuals, families, communities and society is considered through biopsychosocial, economic and legal/political lenses. Dual foci include developmental risks and outcomes for individuals and families throughout the life course, and social policy debate and legislation. Includes a survey of intervention approaches and treatment modalities across the span of self-help, medical treatment, programs in behavioral health and court-mandated models.

SOWK 330. Corrections

Cross listed with: *JUST 330*

Credits 3.00 PeopleSoft Course ID 012193 Grading Basis GRD

The history, philosophy, policies and problems of the treatment of violators by the police, courts and correctional institutions. **Prerequisite(s):** *JUST 200 and one other 200 level JUST course.*

SOWK 332. Community Mental Health Practice**Credits 3.00 PeopleSoft Course ID 001771 Grading Basis GRD**

This course introduces students to definitions, historical developments and factors in the social environment that have shaped understanding of mental illness in the United States and the responses of policy makers and practitioners to address community mental health needs. Service delivery approaches, ranging from those that focus on risk reduction, recovery and community integration/inclusion to those that focus on responding to public behavior and social control, are considered from the perspective of social work values and ethical principles. Students will be challenged to ponder questions of self-determination, social responsibility, justice, and the dignity and worth of persons in life situations that include the experience and impacts of mental illness.

SOWK 335. Social Policy**Credits 3.00 PeopleSoft Course ID 003638 Grading Basis GRD**

Study of the formulation and consequences of social policy in the context of contemporary social, political and economic conditions. Skill development in creation of a proposal, policy evaluation and change advocacy in U.S. society with emphasis on agency, local, state and national levels. **Prerequisite(s):** *POSC 302 or POSC 225; SOWK 287; SOWK 288.*

SOWK 338. Issues and Policies in Family Services**Credits 3.00 PeopleSoft Course ID 002953 Grading Basis GRD**

Examination of historical and philosophical approaches to family policy. Evolution of family-related social policies in the United States is contrasted with those of selected foreign countries with the view toward a national family policy.

SOWK 340. Violence in Families**Credits 3.00 PeopleSoft Course ID 007657 Grading Basis GRD**

Examination of violence in the family, including spouse, sibling, elder and child abuse. Studies the social and cultural patterns and etiology of family violence. Examines programs and services for the abused and the abuser including shelters, support systems and counseling.

SOWK 342. Child Welfare Services**Credits 3.00 PeopleSoft Course ID 010404 Grading Basis GRD**

Study of the basic child welfare services along the continuum of prevention and support; assessment and identification of child abuse and neglect; evidence-based interventions; and family reunification and support. Analysis of legal framework and court services as well as ethical standards that guide practice. Utilizes a resilience and trauma-informed framework to assess practices in the child welfare system as well as collaboration with other systems involved with vulnerable children and families.

SOWK 347. Issues Affecting LGBTQIAP+ Individuals and Their Families

Cross listed with: *FAM 347*

Credits 3.00 PeopleSoft Course ID 014548 Grading Basis GRD

Operating from a cultural humility framework, this course focuses on practice, policy, and historical and social issues impacting LGBTQIAP+ individuals and their families. This course utilizes a strengths-based perspective to identify protective factors and explore resiliency within the LGBTQIAP+ community in the face of social stigma, marginalization and oppression. The course encourages students' critical self-reflection of personal and cultural value systems and how these may impact understanding of LGBTQIAP+ populations.

SOWK 352. Culture and Human Services in Dominica**Credits 3.00 PeopleSoft Course ID 013346**

Study of the culture and formulation of social policy and methods of social work/human service practices in Dominica within the context of contemporary social, political, cultural and economic conditions. Comparisons and linkages will be made with current U.S. social policies and social work practices and theory. Students will work with both U.S. and Dominican professionals. Faculty approval required.

SOWK 362. Social Work with Immigrants and Refugees

Cross listed with: *FAM 362*

Credits 3.00 PeopleSoft Course ID 014604 Grading Basis GRD

This course explores the scope and complexity of global/international migration and its impacts on national policy and social service structures and organizational response. It provides a framework to understand transmigration and acculturation, to analyze aspects of current immigration law, and to examine the role of various service systems to address the needs of immigrant and refugee individuals and families integrating into local communities. Service-learning in an agency that serves the local immigrant community is required.

SOWK 372. Social Work Practice with the Aged**Credits 3.00 PeopleSoft Course ID 001760 Grading Basis GRD**

An examination of America's response to aged Americans from a historical and current perspective. Social problems and social work skills will be examined in light of individual, group and community needs and those affected by social policies.

SOWK 375. Grant Writing for Agencies

Cross listed with: *FAM 375, GERN 375, NPS 375*

Credits 3.00 PeopleSoft Course ID 011229 Grading Basis GRD

Emphasizing active learning, this course teaches the basics of grant and proposal writing. Efficient research, persuasive prose and the importance of relationships are stressed. Private and corporate philanthropy and government grants are examined.

SOWK 386. Youth Empowerment Strategies (YES)

Cross listed with: *FAM 386*

Credits 3.00 PeopleSoft Course ID 011299 Grading Basis GRD

Students learn to use group activities that include the creative arts, low ropes, and self-discovery in youth empowerment. The goal is to help youth build life skills and make informed decisions. Prior to beginning work with youth, students complete 25 hours of training.

SOWK 387. Working with Teens**Credits 3.00 PeopleSoft Course ID 007609 Grading Basis GRD**

Survey of physical, psychological and social theories of adolescent development. Examination of service delivery issues in working with teen-agers. Investigation of topical areas of particular relevance to work with

adolescents including sexuality, abuse and neglect, runaways, depression and suicide, and substance abuse.

SOWK 450. Palliative and Hospice Care: An Interdisciplinary Approach

Cross listed with: *GERN 450*

Credits 3.00 PeopleSoft Course ID 013887 Grading Basis GRD

An interdisciplinary approach to assessment and care planning of older adults experiencing need for palliative and/or hospice support. Familial, cultural, legislative and social implications of programs and service delivery.

SOWK 465. Social Work Practice in Mezzo Systems

Credits 3.00 PeopleSoft Course ID 001320 Grading Basis GRD

Application of social work values, theories and skills with small groups is emphasized. Engagement, assessment, planning intervention strategies, resource utilization and evaluation are examined. Attention is given to the impact of diversity, difference and power differentials on mezzo systems. Role play and group processing are utilized. **Prerequisite(s):** *Social work majors with senior standing and SOWK 305, SOWK 317, SOWK 320, and SOWK 335.*

Corequisite(s): *SOWK 466, SOWK 467, and SOWK 493.*

SOWK 466. Social Work Practice in Micro Systems

Credits 3.00 PeopleSoft Course ID 008450 Grading Basis GRD

Application of social work values, theories and skills to social work practice with individuals and family systems is emphasized. Engagement, assessment, developing intervention plans and evaluation are examined. Attention is given to the impact of diversity, difference and power differentials on micro systems. Development of a simulated case including video-recorded sessions, research and supervisory consultation with the instructor are utilized.

Prerequisite(s): *Social work major with senior standing and SOWK 305, SOWK 317, SOWK 320, and SOWK 335.* **Corequisite(s):** *SOWK 465, SOWK 467, SOWK 493.*

SOWK 467. Social Work Practice in Macro Systems

Credits 3.00 PeopleSoft Course ID 001315 Grading Basis GRD

Application of social work values, theories and skills to organizational, community and policy practice is emphasized. Engagement, assessment, planning intervention strategies, resource utilization and evaluation are examined. Attention is given to the impact of diversity, difference and power differentials on the macro systems. Community-based projects for organizations, communities and policies are utilized. **Prerequisite(s):** *Social work major with senior standing and SOWK 305, SOWK 317, SOWK 320, and SOWK 335.* **Corequisite(s):** *SOWK 465, SOWK 466, SOWK 493.*

SOWK 481. Social Work Field Practicum I

Credits 6.00 PeopleSoft Course ID 010394 Grading Basis GRD

Offers students an opportunity to gain a broad knowledge of the basic functions, services and roles of the agency as related to actual social work practice, as well as a specific knowledge of practical intervention skills necessary to carry on effective social work practice. The field experience is the application of knowledge and skill components drawn from previous courses.

Prerequisite(s): *Admission to the field practicum. Social work majors only. Senior standing.*

SOWK 482. Social Work Field Practicum II

Credits 6.00 PeopleSoft Course ID 000752 Grading Basis GRD

Offers the student an opportunity to build upon previous field experience by having more responsibility and tasks designed to expand their practice skills in social work. **Prerequisite(s):** *SOWK 481. Social work majors only.*

SOWK 487. Special Topics

Credits 3.00 PeopleSoft Course ID 003861 Grading Basis GRD

Examination of selected topics of social work practice which are of current importance in the social work profession. Course may be repeated for credit.

SOWK 490. Special Studies in Social Work

Credits 3.00 PeopleSoft Course ID 000971 Grading Basis GRD

This course is restricted to majors in social work. The course provides capable students an opportunity to complete independent studies under faculty supervision. Course may be repeated for credit. **Prerequisite(s):** *Recommendation of the instructor and permission of the department head.*

SOWK 493. Professional Forum I: Preparation for Field

Credits 1.00 PeopleSoft Course ID 013880 Grading Basis GRD

This course provides an orientation to the pedagogy and process of the field practicum. Students become acclimated to the placement process as well as the expectations and requirements of professional social work practice in field sites and includes a series of trainings on topics and issues needed prior to entering their field placement. **Prerequisite(s):** *SOWK 305, SOWK 317, SOWK 320 and SOWK 335; admission to the social work program; completion of 50 pre-field service hours; senior standing.* **Corequisite(s):** *SOWK 465, SOWK 466 and SOWK 467.*

SOWK 494. Professional Forum II: Transition to Professional Practice

Credits 3.00 PeopleSoft Course ID 003519 Grading Basis GRD

Synthesis of coursework throughout the curriculum with the field practicum experience promotes identity as beginning-level generalist social workers and facilitates their transition to professional practice. Critical thinking and reflection are emphasized as students identify and evaluate the empirical and theoretical foundations of practice. Senior outcome assessment is integral to this course.

Prerequisite(s): *Social work majors only. Senior standing. SOWK 465, SOWK 466, SOWK 467, and SOWK 493.* **Corequisite(s):** *SOWK 481 and SOWK 482.*

SOWK 499. Honors

Credits 3.00 PeopleSoft Course ID 003689 Grading Basis OPT

Independent research topic initiated and completed by qualified second semester junior social work majors.

SOWK 499A. Honors

Credits 1.00 PeopleSoft Course ID 009227 Grading Basis GRD

Prerequisite(s): *Social Work Majors only*

SOWK 499B. Honors

Credits 3.00 PeopleSoft Course ID 005017 Grading Basis GRD

Prerequisite(s): *Social Work Majors only*

SOWK 499C. Honors

Credits 2.00 PeopleSoft Course ID 007050 Grading Basis GRD

Prerequisite(s): *Social Work Majors only*

Sociology

SOCI 101. Introductory Sociology

Credits 3.00 PeopleSoft Course ID 006056 Grading Basis GRD

Provides students with an understanding of the structure and processes of modern societies and their historical antecedents. Explores the universality of the social experience by addressing such topics as culture, socialization, social interaction, bureaucracy, norms and diversity, social inequality, social institutions, modernization, technology and social change, world views, values and behavior.

SOCI 110. Social Issues in a Global Context [C4GE]

Credits 3.00 PeopleSoft Course ID 010013 Grading Basis GRD

This course introduces the discipline of sociology from a macrosociological perspective, emphasizing large-scale changes in social organization and institutions. We examine the global forces that shape societies, and the historical, political, social, cultural and economic origins of contemporary social

problems. We consider competing theoretical models used in the study of social change as well as the conceptual and methodological challenges in analyzing societies different from one's own. May be used for general education credit.

SOCI 140. Microsociology: The Individual in Society [C5SD]

Credits 3.00 PeopleSoft Course ID 010665 Grading Basis GRD

This course introduces the discipline of sociology and the subfield of microsociology. We examine the mutually constitutive relationship between the individual and society. Questions addressed include: How does society influence how we think, feel, believe, act, and interact with others? What influences the self, social identity, shared social meanings, social roles, and one's position in society? How do we, as individuals and as members of social groups, recreate, contest, and change society? May be used for general education credit.

SOCI 200. Development of Sociological Thought and Method

Credits 3.00 PeopleSoft Course ID 010808 Grading Basis GRD

This course is a foundation course for sociology majors. Topics will include the historical development of the discipline with an emphasis on the social and philosophical forces that influenced the development of sociology. Main sociological traditions will be introduced including the critical, naturalistic, and interpretive paradigms and sociological analysis from these perspectives.

Prerequisite(s): *SOCI 101 or SOCI 110 or SOCI 140 or permission of instructor.*

SOCI 231. Introduction to Social Statistics

Credits 3.00 PeopleSoft Course ID 001287 Grading Basis GRD

Introduction to the techniques for collecting, describing, analyzing and presenting sociological data.

SOCI 280. Social Gerontology

Cross listed with: *GERN 280*

Credits 3.00 PeopleSoft Course ID 002621 Grading Basis GRD

An interdisciplinary introduction to the study of aging. The course provides an overview of issues surrounding aging in contemporary society: personal, familial, communal and societal. **Corequisite(s):** *20 hours of community service-learning.*

SOCI 300. Sociological Inquiry

Credits 3.00 PeopleSoft Course ID 012594 Grading Basis GRD

A systematic introduction to various modes of sociological investigation, including positivism, interpretivism, and critical analysis. Students learn to evaluate, critique, and design original sociological inquiries with special attention to how sociological inquiry is guided by different philosophical and theoretical commitments. **Prerequisite(s):** *SOCI Major and; SOCI 200 and SOCI 231 or equivalent.*

SOCI 303. Sociology of Death and Dying

Credits 3.00 PeopleSoft Course ID 009416 Grading Basis GRD

Investigation of current American orientations toward death and dying with emphasis also given to the social organization of death and dying.

SOCI 304. Social Deviance

Credits 3.00 PeopleSoft Course ID 001108 Grading Basis GRD

Course offers students a wide range of explanations of deviance. Topics considered are the functions, social definitions, societal reactions and political aspects of deviance as characteristic of all societies. Deviant attributes as well as acts are considered.

SOCI 306. Japanese Society and Culture

Cross listed with: *ANTH 306*

Credits 3.00 PeopleSoft Course ID 013685 Grading Basis GRD

This introductory course takes a critical and interdisciplinary approach to exploring Japan. We will apply Sociological, Anthropological, and Demographic perspectives to comparatively understand, analyze, and discuss Japanese society and culture. Students will read and discuss issues related to history, sociodemographic change, gender, work, social class, race/ethnicity, family, health care, and aging in Japanese society.

SOCI 307. Sociology of the Life Course

Credits 3.00 PeopleSoft Course ID 014441 Grading Basis GRD

This course introduces students to theories, methods and research based on the life course paradigm. A life course perspective focuses on intersections of individual lives, historical context, social change and social structure. Based on this framework students will look at how life trajectories are influenced by the broader social structure and historical context. Students will also look at how prior life stages can positively or negatively influence later life outcomes of individuals. Students will have an opportunity to apply the life course perspective to discuss research and to examine how life changes (marriage, divorce, job, childbirth, death, etc.) are influenced by social factors and contexts.

SOCI 309. Capitalism and Alternative Economies

Credits 3.00 PeopleSoft Course ID 014199 Grading Basis GRD

This course examines the structure and dynamics of capitalism as a social system and considers the affordances and limitations of this mode of organizing production, consumption and the satisfaction of human needs. Building on this analysis, the course then critically examines a wide array of alternative or non-capitalist organizations and enterprises emerging from the "new," "solidarity" or "social" economy movements, with particular attention paid to the role of commerce and markets in these arrangements.

SOCI 311. Sociology of the Environment

Credits 3.00 PeopleSoft Course ID 011588 Grading Basis GRD

This course will introduce students to the central debates that currently preoccupy environmental sociology and political ecology. Emphasis is placed on the importance of sociological, historical and cultural modes of inquiry for understanding: socio-ecological change/crisis, environmental justice/injustice, eco-technological change and the politics of "nature".

SOCI 315. Technology and Society

Credits 3.00 PeopleSoft Course ID 000482 Grading Basis GRD

Through an analysis of various issues, problems and case studies, this course will explore the interactions between science, technology and society. The course will examine connections of specific technologies to science, cultural values, social and economic interests, and questions regarding progress.

SOCI 318. Sociology of Immigration

Credits 3.00 PeopleSoft Course ID 013140 Grading Basis GRD

This course explores the patterns and processes defining immigration around the world: the reasons for migration, the types of migration, and the way it affects the sending and receiving societies. The course investigates the social forces that affect immigrants and the traits that impact their relocation experience; and how immigration creates new identities for those successful in their quest, contributing to greater cultural diversity of receiving societies.

SOCI 321. Politics in Society

Credits 3.00 PeopleSoft Course ID 009213 Grading Basis GRD

The relationship between society and politics, the nature and distribution of social power, political participation, political thought and politics as a vehicle of social change are explored.

SOCI 322. Sociology of Religion

Cross listed with: *REL 322*

Credits 3.00 PeopleSoft Course ID 001565 Grading Basis GRD

This course is a sociological analysis of the nature, function, and structure of religion. Survey of the relationship between religion and society: the social nature of religious phenomena, the interaction between religious beliefs and practices and other arenas of secular societies, the social functions of religion, and the way religion changes and is changed by secular society.

SOCI 328. Digital Inequality**Credits 3.00 PeopleSoft Course ID 014058 Grading Basis GRD**

This course examines how social inequality shapes and is reproduced and challenged through digital information and communication technologies. Students will explore how the use of these technologies by consumers, corporations and governments plays an increasingly prominent role in how inequality is structured and experienced in contemporary society.

SOCI 329. Sociology of Sport**Credits 3.00 PeopleSoft Course ID 014200 Grading Basis GRD**

This course examines sport as a social institution. It explores the origins and evolution of modern sporting practices and their connections to other social institutions and dimensions of social change. In surveying multiple issues connected to sport and society, particular emphasis will be placed on the production and reproduction of social inequalities through sporting practice and consumption.

SOCI 334. Self and Society**Credits 3.00 PeopleSoft Course ID 008694 Grading Basis GRD**

This course examines the dialectical relationship between self and society. Two primary questions guide the course: How am I, as a social being, created by society? And, in turn, how is society created and sustained by me? In contrast to biological or psychological explanations, this course provides a distinctly sociological analysis of the self. Drawing from multiple perspectives in sociology, the course focuses on the social character of the self, the process of its acquisition and the social influences that continually shape it. Related topics include the social construction of reality, identity construction, emotions, power and inequality, symbolic interaction, ethnomethodology, and impression management.

SOCI 335. Disability and Society**Credits 3.00 PeopleSoft Course ID 013769 Grading Basis GRD**

This class focuses on the social and cultural aspects of disability in the US and around the world. It explores the meaning of the concept 'disability'; its relation to other social markers such as race, gender, and sexual orientation; how it is experienced by those occupying the category; and major policy approaches to dealing with disability.

SOCI 336. Race and Ethnicity**Credits 3.00 PeopleSoft Course ID 005593 Grading Basis GRD**

This course examines the social construction of race and ethnicity around the world and how they influence social processes, institutions, change and ideology. The course will include discussions concerning the intersection of race and ethnicity with other aspects of social inequality such as class, gender, sexuality and nationality in contemporary society.

SOCI 337. Sociology of Gender

Cross listed with: WGSS 337

Credits 3.00 PeopleSoft Course ID 002258 Grading Basis GRD

Examination of theories of sex role development, the roles of men and women in society and gender as a social construction.

SOCI 338. U.S. Urban History

Cross listed with: HIST 338

Credits 3.00 PeopleSoft Course ID 011867 Grading Basis GRD

In this course students explore the history of urban spaces in the United States by investigating American cities using a broad chronological, geographical, and thematic framework. Drawing from an array of primary and secondary sources, students will become familiar with the central themes of urban history, and also have the opportunity to produce their own narratives.

SOCI 341. Sociology of Education**Credits 3.00 PeopleSoft Course ID 005308 Grading Basis GRD**

Examination of sociological theories and research on education, emphasizing stratification, socialization, organization, and relationship between schooling, family, community, and work. Focus on cross-cultural approaches to education.

SOCI 342. Social Movements in the Middle East**Credits 3.00 PeopleSoft Course ID 011896 Grading Basis GRD**

This course is designed to provide a basic knowledge of current Islamic movements in the Middle East. The primary emphasis is on social movements in Iran, Iraq, Egypt, Algeria, Lebanon, Palestine and Afghanistan.

SOCI 344. Work and Society**Credits 3.00 PeopleSoft Course ID 009846 Grading Basis GRD**

This course examines the nature and meaning of work under various social and historical conditions. This includes such things as the relationship of work organization to life chances and personal experience, the place of work in social theory, the organization of occupations, occupational socialization and commitment, and how the nature of work changes in relation to local and global contexts.

SOCI 347. Queer Theories of Gender and Inequality

Cross listed with: WGSS 347

Credits 3.00 PeopleSoft Course ID 013850

Contemporary approaches to the culture and social structure of gender and gender binaries, as they intersect with power, knowledge, science/biology and inequality. Method involves examining and challenging the cultural classification systems that inform knowledge, human action and social institutions. Requires college-level reading, writing and intellectual engagement.

SOCI 348. Introduction to Developing Societies**Credits 3.00 PeopleSoft Course ID 003393 Grading Basis GRD**

This course examines economic development and social and political change in developing countries. The historical experiences of developing societies will be analyzed within the context of the global system and from the perspective of competing and complementary theoretical perspectives.

SOCI 352. Birth, Death, Sex: Exploring Demography

Cross listed with: ANTH 352

Credits 3.00 PeopleSoft Course ID 001047 Grading Basis GRD

Fertility (birth) and mortality (death) and their biological and social determinants in cross-cultural and evolutionary/historical frameworks. Exploration of the dynamic between the material constraints on and symbolic significance of reproduction, sexuality and death within a cultural context. Critical examination of population growth as a global "problem." Basic demographic methods.

SOCI 354. Social Inequality**Credits 3.00 PeopleSoft Course ID 001543 Grading Basis GRD**

Course covers the systems of stratification and inequality in the United States including race, class, gender, religion, sexuality, ethnicity, and nationality. Discussion will center on their role in providing rationales for oppression and discrimination in society and their relationship to the distribution of power and ideological control.

SOCI 357. Sociology of Disasters

Credits 3.00 PeopleSoft Course ID 013443 Grading Basis GRD

This course aims to familiarize students with the sociological study of the causes and consequences of disasters. The course takes a broad view of the social science literature on disasters, but largely employs a case study approach. In keeping with sociology's focus on the causes and consequences of social stratification, the relationship between disasters and patterns of inequality will be a central theme throughout the course.

SOCI 358. Sociology of Consumption**Credits 3.00 PeopleSoft Course ID 011611 Grading Basis GRD**

Consumption encompasses themes that range from identity construction to the macro processes of cultural globalization. As consumption becomes more integral to society, it is becoming more central to various disciplines. This course situates scholarly work from this nascent interdisciplinary field of consumption studies within the context of contemporary social, cultural, and economic issues.

SOCI 359. The Sociology of Climate Denial**Credits 3.00 PeopleSoft Course ID 014432 Grading Basis GRD**

This course explores the social scientific research on what has been a highly effective campaign to inject doubt and uncertainty into the American public's understanding of human-caused climate change and the extent of scientific consensus on this issue. The course examines the key institutional actors involved in this effort and the diverse set of interests they represent. Students will also explore other denial campaigns with the goal of generating insights useful for challenging climate denial and denialism more generally.

SOCI 360. Social Movements**Credits 3.00 PeopleSoft Course ID 010347 Grading Basis GRD**

Introduction to the study and analysis of social movements in the United States as agents of social and ideological change. Emphasis is given to movements which have goals of extending and/or protecting rights of individuals and groups in the face of increasing industrialization, urbanization and centralization of power.

SOCI 361. Sociology of Organizations**Credits 3.00 PeopleSoft Course ID 009173 Grading Basis GRD**

Study of formal organizations primarily in contemporary society. Emphasis is given to the social-historical context that has given rise to and perpetuates the bureaucracy as a form of social organization, and to the study of the structure and dynamics of contemporary formal organizations such as businesses, universities, governments, etc.

SOCI 363. Sociology of Culture**Credits 3.00 PeopleSoft Course ID 011608**

This course examines sociological perspectives about values, norms, symbols, rituals and expressions. Course content includes classic perspectives on the relation between culture and institutions as well as the work of contemporary analysts who have developed, revised and/or challenged these classic positions. Students will learn to apply these perspectives to their own analyses of culture.

SOCI 367. Sociology of Sexuality

Cross listed with: WGSS 367

Credits 3.00 PeopleSoft Course ID 011590 Grading Basis GRD

This course examines sociological theory and research on sexual behaviors, identities, cultures, and social movements, investigating how sexuality is shaped by society and its social institutions. In addition, the course examines how sociological research on sexuality is conducted, how society shapes the sociological study of sexuality, the unique ethical concerns and methodological

challenges in researching sexuality, and the place of sociology in shaping discourse and social policy on relevant social issues.

SOCI 368. Contemporary American Culture

Cross listed with: ANTH 368

Credits 3.00 PeopleSoft Course ID 000316 Grading Basis GRD

This course analyzes contemporary American society in relation to popular cultural formations and representations. Cultural expressions found in music, literature, film, television, cyberspace and sports will be examined with respect to the values, sentiments, identity constructions, and lived experiences of differentially situated social actors.

SOCI 372. Sociology of the Community**Credits 3.00 PeopleSoft Course ID 010095**

This course examines the community as a social form. Considered are its function, social definitions, formative processes, development and systems of change. This survey may include, but not be limited to, examination of community studies research and community advocacy for social justice.

SOCI 374. Sociology of Families**Credits 3.00 PeopleSoft Course ID 007252 Grading Basis GRD**

Covers the basic concepts and theories in marriage and the family; looks at basic issues in modern family life; examines changes in family functions and in the various stages of the family life cycle and discusses the future of the family in contemporary society.

SOCI 375. Medical Sociology**Credits 3.00 PeopleSoft Course ID 007764 Grading Basis GRD**

An introduction to the field of medical sociology that examines the salient issues in the field and related theoretical perspectives. These two focuses are important in understanding the ability of humans to live to capacity. Attention is given to health-care programs in developing countries as well as modern industrial societies.

SOCI 382. Qualitative Sociology**Credits 3.00 PeopleSoft Course ID 013444 Grading Basis GRD**

This course introduces students to qualitative research methods, including participant observation, interviewing, and content analysis. Students will read examples of qualitative sociology and learn how to design and conduct a qualitative research study. In addition to reviewing methodological, theoretical, and ethical issues, students will produce an independent qualitative research project. **Prerequisite(s):** SOCI 200

SOCI 385. Madness and Society: The Sociology of Mental Health and Illness**Credits 3.00 PeopleSoft Course ID 013062 Grading Basis GRD**

This course will explore the role that social and cultural factors play in the occurrence, diagnosis, experience, and treatment of mental illness. It will compare sociological perspectives to those of biology and psychology. The course will examine the intersection of mental health systems with other systems, such as the broader health care and the criminal justice systems. Finally, it will critically analyze psychiatry, policy, and popular culture depictions of the mentally ill.

SOCI 386. Sociology of Nonprofit Organizations**Credits 3.00 PeopleSoft Course ID 014097 Grading Basis GRD**

Focusing primarily on the United States, this course examines the historical and theoretical frameworks that have shaped today's nonprofit organizations. Students will gain a practical understanding of the various types of nonprofit organizations (NPOs) in order to fully grasp their significance as drivers of social change. Special focus will be given to the meaning of civil society, philanthropy as a social construct, stakeholders, professionalization, and the

opportunities and challenges facing NPOs in an increasingly interconnected world.

SOCI 388. Prisons, Punishment and the State

Credits 3.00 PeopleSoft Course ID 013863 Grading Basis GRD

The course investigates the nature of punishment and the particular forms of punishment meted out by the state. Questions include: What is the purpose of punishment? Why does the state choose incarceration as its standard punishment? What forms of punishment exist in other cultures? We focus on the contexts in which prisons emerged in the US and what they say about our society. Discussions center on power, race, class, gender, age and the political economics of the criminal justice system. **Prerequisite(s):** *ANTH 195 or permission of the instructor.*

SOCI 390. Topics in Cultural Studies

Cross listed with: *ANTH 390*

Credits 3.00 PeopleSoft Course ID 011609 Grading Basis GRD

This course explores contemporary culture through a "cultural studies" lens, an interdisciplinary perspective interested in using empirical knowledge to encourage more just human relations. Specific topics of investigation will vary by semester, but each course will cover cultural studies' intellectual history and its application to cultural expressions found in everyday life, film, music, and text.

SOCI 391. Study Abroad

Credits 1.00 - 6.00 PeopleSoft Course ID 011263 Grading Basis GRD

Designed to encourage students to enhance their academic programs through studying abroad. Arrangements must be made with a faculty member who will direct the study with preparatory instructions and final requirements. May be repeated up to 12 credits.

SOCI 395. Special Topics in Sociology

Credits 3.00 PeopleSoft Course ID 009862 Grading Basis GRD

Examination of selected topics which are of current importance in sociology. May be repeated for credit when course content changes.

SOCI 480. Senior Seminar in Sociology

Credits 3.00 PeopleSoft Course ID 009030 Grading Basis GRD

The integration of previous class experience the student has had during the undergraduate years. Fulfills the College of Arts and Letters writing-intensive requirement for the major. Can be repeated as course content changes. **Prerequisite(s):** *SOCI 300.*

SOCI 485. Sociology Course Assistantship

Credits 1.00 - 3.00 PeopleSoft Course ID 007654 Grading Basis GRD

Assistantships provide students with a sense of what it is like to teach a sociology course by allowing them to work closely with faculty members through different phases of course preparation, presentation and evaluation. Assistantships also allow for a deeper understanding of course material by providing opportunities for student assistants to lead discussion and to help their peers review the material outside of the classroom. **Prerequisite(s):** *Student must have junior/senior standing, must have earned a grade of B or better in the course for which they will serve as assistant, and may register by faculty invitation only. May be repeated up to six credits; only three credits can count towards the major. A student may serve as a course assistant to the same course twice.*

SOCI 490. Independent Study in Sociology

Credits 1.00 - 3.00 PeopleSoft Course ID 010399 Grading Basis GRD

Designed to give capable students in sociology an opportunity to complete independent study under supervision. **Prerequisite(s):** *Recommendation of the instructor. More than one repeat requires department head approval.*

SOCI 492. Internship in Sociology

Credits 1.00 - 3.00 PeopleSoft Course ID 000073 Grading Basis GRD

Provides the student with practical experience in employing and refining sociological skills in a public or private agency under faculty supervision. May be repeated up to six credits.

SOCI 499A. Honors

Credits 1.00 PeopleSoft Course ID 004342 Grading Basis GRD

An independent research topic initiated and completed by qualified senior majors who want to graduate with distinction. **Prerequisite(s):** *Declared sociology major.*

SOCI 499B. Honors

Credits 3.00 PeopleSoft Course ID 005748 Grading Basis GRD

An independent research topic initiated and completed by qualified senior majors who want to graduate with distinction. **Prerequisite(s):** *Declared sociology major.*

SOCI 499C. Honors

Credits 1.00 - 2.00 PeopleSoft Course ID 008466 Grading Basis GRD

An independent research topic initiated and completed by qualified senior majors who want to graduate with distinction. **Prerequisite(s):** *Declared sociology major.*

Spanish

SPAN 101. Elementary Spanish I

Credits 3.00 - 4.00 PeopleSoft Course ID 007548 Grading Basis GRD

The fundamentals of Spanish through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. Students will work one hour per week in the language laboratory.

SPAN 102. Elementary Spanish II

Credits 3.00 - 4.00 PeopleSoft Course ID 006416 Grading Basis GRD

This is the second course in the progress of learning the fundamentals of Spanish through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. Students will work one hour per week in the language laboratory. **Prerequisite(s):** *SPAN 101.*

SPAN 109. Accelerated Review of Elementary Spanish

Credits 3.00 PeopleSoft Course ID 008514 Grading Basis GRD

Reviews elementary Spanish grammar, reading, writing, speaking and listening skills in Spanish. One hour of work a week in the language laboratory. For students who have had no more than two or three years of Spanish in high school or qualify through the placement exam. **Prerequisite(s):** *Permission of the department head or sufficient score on Foreign Language Placement Exam.*

SPAN 111. Intensive Span I

Credits 6.00 PeopleSoft Course ID 002748 Grading Basis GRD

The fundamentals of Spanish through listening, speaking, reading and writing. The course is the equivalent of SPAN 101 - SPAN 102.

SPAN 212. Intensive Spanish II

Credits 6.00 PeopleSoft Course ID 008294 Grading Basis GRD

The fundamentals of Spanish through listening, speaking, reading and writing. The course is the equivalent of SPAN 231 - SPAN 232. **Prerequisite(s):** *SPAN 102, SPAN 109 or SPAN 111 or sufficient score on the Foreign Language Placement Exam.*

SPAN 231. Intermediate Spanish I

Credits 3.00 PeopleSoft Course ID 009708 Grading Basis GRD

A thorough review of grammar, vocabulary building, conversation, composition and reading. **Prerequisite(s):** *SPAN 102 / SPAN 109 / SPAN 111 or sufficient score on FL Spanish Placement Exam. A student cannot earn credit for SPAN 231 after completing SPAN 232.*

SPAN 232. Intermediate Spanish II**Credits 3.00 PeopleSoft Course ID 003791 Grading Basis GRD**

A thorough review of grammar, vocabulary building, conversation, composition and reading. **Prerequisite(s):** *Prerequisite: SPAN 231 or sufficient score on FL Spanish Placement Exam.*

SPAN 300. Grammar and Communication**Credits 3.00 PeopleSoft Course ID 005862 Grading Basis GRD**

Intensive training in grammatical structures and their application to oral and written communication. Instruction is in Spanish. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** *SPAN 232 or SPAN 212 or per placement exam score (Spanish).*

SPAN 300S. Spanish Grammar and Communication**Credits 3.00 PeopleSoft Course ID 011195 Grading Basis GRD**

Intensive training in the use and comprehension of modern, everyday Spanish with emphasis on conversation and composition to give students confidence in expressing themselves in simple idiomatic Spanish. Instruction is in Spanish. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** *SPAN 232 or equivalent. Studies Abroad-Salamanca.*

SPAN 307. History of Spanish Culture and Society**Credits 3.00 PeopleSoft Course ID 010461 Grading Basis GRD**

A history of Spanish culture and society from the Romans until the present. Review of historical and contemporary figures. Instruction is in Spanish. **Prerequisite(s):** *SPAN 300.*

SPAN 307S. Spanish Civilization**Credits 3.00 PeopleSoft Course ID 000947 Grading Basis GRD**

Study of Spanish life and culture from ancient times to the present. **Prerequisite(s):** *SPAN 300 or equivalent. Studies Abroad-Salamanca.*

SPAN 308. Latin American Cultures**Credits 3.00 PeopleSoft Course ID 006771 Grading Basis GRD**

A study of the geographical, historical and cultural development of Latin America from pre-Columbian times to the present. Instruction is in Spanish. **Prerequisite(s):** *SPAN 300.*

SPAN 308S. Latin American Civilization - Salamanca**Credits 3.00 PeopleSoft Course ID 011196 Grading Basis GRD**

A study of the geographical, historical and cultural development of Latin America from pre-Columbian times to the present. Instruction is in Spanish. May be used for general education credit. **Prerequisite(s):** *SPAN 300 or equivalent. Studies Abroad-Salamanca*

SPAN 310. Introduction to Spanish Linguistics**Credits 3.00 PeopleSoft Course ID 013636 Grading Basis GRD**

This course will introduce students to the fundamental components of linguistics (phonology, morphology, syntax, pragmatics, and semantics) using data from the Spanish language. The topics and approach of this course consider the social and dialectal varieties of Spanish and the change of Spanish over time, including the present use of Spanish in the United States. The course requires no previous knowledge of linguistics, but presupposes familiarity with Spanish at the 300 credit level or higher.

SPAN 311. Contrastive Linguistics**Credits 3.00 PeopleSoft Course ID 012395 Grading Basis GRD**

In this course students analyze the main grammatical differences between Spanish and English with the focus on producing accurate and idiomatic translations into both languages. **Prerequisite(s):** *SPAN 300.*

SPAN 312. Translation Competencies**Credits 3.00 PeopleSoft Course ID 012417 Grading Basis GRD**

In this course, students will develop linguistic competencies required in translation, including reading comprehension, summary writing, text analysis, and use of mono- and bilingual dictionaries. Students will learn some basic electronic tools and word processing skills for translators, and practice several types of translation, including direct translation, inverse translation and back translation. **Prerequisite(s):** *SPAN 300.*

SPAN 315. Spanish Phonetics**Credits 3.00 PeopleSoft Course ID 003697 Grading Basis GRD**

Intensive drills in Spanish sounds and intonation patterns. Continued emphasis on conversation. **Prerequisite(s):** *SPAN 300.*

SPAN 320. Oral and Written Communication**Credits 3.00 PeopleSoft Course ID 006196 Grading Basis GRD**

Intensive training in the use of modern, everyday Spanish with emphasis on conversation and composition. Readings in Spanish will provide a context for discussion and writing. **Prerequisite(s):** *SPAN 300.*

SPAN 320S. Spanish Oral and Written Communication**Credits 3.00 PeopleSoft Course ID 000886 Grading Basis GRD**

Intensive training in the use of modern, everyday Spanish with emphasis on conversation and composition. Readings in Spanish will provide a context for discussion and writing. Instruction is in Spanish. **Prerequisite(s):** *SPAN 300 or equivalent. Studies Abroad-Salamanca.*

SPAN 321. Oral and Written Communication (for Heritage Speakers)**Credits 3.00 PeopleSoft Course ID 013933 Grading Basis GRD**

This course takes the place of SPAN 320 for the heritage speaker of Spanish (someone who has learned Spanish from family members and/or at home), with mostly oral (and not written) experience. It provides an opportunity for the student to expand their existing proficiency and to develop more formal language skills. Emphasis will be placed on reading, writing and presenting. Topics of current Latino issues will keep students interested and engaged.

Prerequisite(s): *Student must be a heritage speaker, have an appropriate placement score (+451) and have taken or be currently taking SPAN 300, or permission of the instructor.*

SPAN 330. Business Spanish**Credits 3.00 PeopleSoft Course ID 006968 Grading Basis GRD**

This course presents basic business and commercial Spanish vocabulary and terminology. It focuses on trade customs and commercial communication, including interviews, letter writing and simultaneous interpretation. Instruction is in Spanish. **Prerequisite(s):** *SPAN 300.*

SPAN 330S. Business Spanish-Salamanca**Credits 3.00 PeopleSoft Course ID 011198 Grading Basis GRD**

Study of commercial and technical vocabulary and trade customs in conjunction with practice in the art of commercial communication including interviews, letter writing and simultaneous interpretation. **Prerequisite(s):** *SPAN 300 or equivalent. Studies Abroad-Salamanca.*

SPAN 335. Introduction to Hispanic Literature**Credits 3.00 PeopleSoft Course ID 004286 Grading Basis GRD**

This course is designed to prepare students in literary analysis of the novel as well as short stories, poetry and drama. All necessary terminology will be studied. Mandatory for all Spanish majors before taking any other literature class. Instruction is in Spanish. **Prerequisite(s):** *SPAN 300.*

SPAN 335S. Introduction to Spanish Literature**Credits 3.00 PeopleSoft Course ID 011721 Grading Basis GRD**

This course is designed to prepare students in literary analysis of the novel as well as short stories, poetry and drama. All necessary terminology will be studied. Mandatory for all Spanish majors before taking any other literature

class. Instruction is in Spanish. **Prerequisite(s):** SPAN 300 or equivalent. *Studies Abroad-Salamanca.*

SPAN 360. Spanish for Public Safety

Credits 3.00 PeopleSoft Course ID 011944 Grading Basis GRD

This course presents basic Spanish legal vocabulary and terminology. It emphasizes the practical application of the Spanish language in routine and high-risk law enforcement situations and explores cultural issues that are important for law enforcement personnel. **Prerequisite(s):** SPAN 232.

SPAN 365. Spanish for Medical Professionals I

Cross listed with: SPAN 365S

Credits 3.00 PeopleSoft Course ID 011946 Grading Basis GRD

This course focuses on the basic Spanish language and vocabulary required in the fields of medicine and health sciences. Students practice their oral Spanish skills in various simulated medical situations in preparation for future professional application in the medical environment. **Prerequisite(s):** SPAN 300.

SPAN 365S. Spanish for Medical Professionals I

Cross listed with: SPAN 365

Credits 3.00 PeopleSoft Course ID 011946 Grading Basis GRD

This course focuses on the basic Spanish language and vocabulary required in the fields of medicine and health sciences. Students practice their oral Spanish skills in various simulated medical situations in preparation for future professional application in the medical environment. **Prerequisite(s):** SPAN 300 or equivalent. *Studies Abroad-Salamanca.*

SPAN 370. Legal Spanish

Credits 3.00 PeopleSoft Course ID 012652 Grading Basis GRD

This course presents basic Spanish legal vocabulary and terminology in various contexts and develops basic skills in reading and writing legal documents in Spanish. It focuses on Latin American and Spanish legal systems and discusses related cultural contexts. **Prerequisite(s):** SPAN 300.

SPAN 375. Spanish for Medical Professionals II

Credits 3.00 PeopleSoft Course ID 012311 Grading Basis GRD

This course provides future medical professionals with further practice in Spanish in the medical context. Students learn advanced medical vocabulary and anatomical terminology, develop their reading comprehension skills, and acquire greater fluency through student presentations and classroom discussions on the latest medical techniques and advances. **Prerequisite(s):** SPAN 365.

SPAN 385. Latin American Short Story

Credits 3.00 PeopleSoft Course ID 002204 Grading Basis GRD

Reading and analysis of representative short stories from Latin America. Student reports on selected authors. Instruction is in Spanish. **Prerequisite(s):** SPAN 335.

SPAN 385S. Latin American Drama and Short Stories-Salamanca

Credits 3.00 PeopleSoft Course ID 011199 Grading Basis GRD

Reading and analysis of representative plays and short stories from Latin America. Student reports on selected authors. Instruction is in Spanish. May be used for general education credit. **Prerequisite(s):** SPAN 335. *Studies Abroad-Salamanca.*

SPAN 386. Spanish Short Stories

Credits 3.00 PeopleSoft Course ID 013934 Grading Basis GRD

A study of literary Spanish short stories from the Middle Ages to the present, including a selection of texts by prominent authors such as Don Juan Manuel, Cervantes, Alarcón, Bécquer, Zorrilla and Clarín. **Prerequisite(s):** SPAN 335.

SPAN 395. Latin American Poetry

Credits 3.00 PeopleSoft Course ID 011167 Grading Basis GRD

In this course, students will read and analyze representatives of Latin American poets. Students will report on selected authors. Instruction is in Spanish.

Prerequisite(s): SPAN 335.

SPAN 400. Advanced Conversation

Credits 3.00 PeopleSoft Course ID 006956 Grading Basis GRD

Discussions deal with topics of current interest. Instruction is in Spanish.

Prerequisite(s): SPAN 320 or SPAN 321.

SPAN 400S. Advanced Conversation and Composition-Salamanca

Credits 3.00 PeopleSoft Course ID 011200 Grading Basis GRD

Discussions deal with topics of current interest. Instruction is in Spanish. **Prerequisite(s):** SPAN 300 or equivalent. *Studies Abroad-Salamanca.*

SPAN 401. Hispanic/Latinx Cinema for Spanish Conversation

Credits 3.00 PeopleSoft Course ID 012396 Grading Basis GRD

This is an advanced conversation course that is designed to develop spoken and written fluency and accuracy in film and cultural analysis. Students explore several aspects of life and culture in the Spanish-speaking world and the U.S. including identity, history, politics, social class, gender roles and regional language and arts. **Prerequisite(s):** SPAN 320 or SPAN 321.

SPAN 404. Spanish in the United States

Credits 3.00 PeopleSoft Course ID 013851 Grading Basis GRD

This course will study the present situation of Spanish in the United States, how Spanish has been shaped by social forces in the US and how Spanish, in turn, shapes these forces. **Prerequisite(s):** SPAN 320 or SPAN 321 or permission of the instructor.

SPAN 405. Spanish Novels of the 19th and 20th Centuries

Credits 3.00 PeopleSoft Course ID 003102 Grading Basis GRD

The development of the Spanish novel from the "costumbristas" through the realism of Galdos, and from the writers of the Generation of 1898 to the present. Instruction is in Spanish. **Prerequisite(s):** SPAN 335.

SPAN 406. Spanish Drama of the 19th and 20th Centuries

Credits 3.00 PeopleSoft Course ID 009914 Grading Basis GRD

Readings and discussions of representative works of Spanish drama from the Romantic period to the present. Instruction is in Spanish. **Prerequisite(s):** SPAN 335

SPAN 407. Aspects of Contemporary Spanish Culture and Society

Credits 3.00 PeopleSoft Course ID 011168 Grading Basis GRD

This course will study the history, culture and society of Spain during the 20th and 21st centuries. Emphasis will be placed on the changes in Spain after Franco. Instruction in Spanish. **Prerequisite(s):** SPAN 300.

SPAN 408. Aspects of Latin American Culture

Credits 3.00 PeopleSoft Course ID 004311 Grading Basis GRD

The course explores the different Latin American and Latinx identities from a contemporary perspective. The emphasis is placed on the 20th and 21st century, and Latinx cultural manifestations. Instruction is in Spanish.

Prerequisite(s): SPAN 300.

SPAN 415. Latin American Novel

Credits 3.00 PeopleSoft Course ID 005983 Grading Basis GRD

In this course, students will read and analyze representatives of Latin American novelists of the 20th century. Students report on selected authors. Instruction is in Spanish. **Prerequisite(s):** SPAN 335.

SPAN 424. Spanish Picaresque Novel

Credits 3.00 PeopleSoft Course ID 013445 Grading Basis GRD

A study of the Spanish Picaresque Novel, including Lazarillo de Tormes, Quevedo's El Buscon and Alonso de Castillo Solorzano's Las harpias en

Madrid, culminating in the connections of Cervantes work with the picaresque.

Prerequisite(s): SPAN 335 or permission of the instructor

SPAN 425. Prose of the Golden Age

Credits 3.00 PeopleSoft Course ID 000816 Grading Basis GRD

A study of the chivalric, sentimental, pastoral and picaresque genres of prose literature and of their development through the Golden Age, Culminating in Cervantes. Instruction is in Spanish. **Prerequisite(s):** SPAN 335

SPAN 426. Drama of the Golden Age

Credits 3.00 PeopleSoft Course ID 005429 Grading Basis GRD

A study of the "comedia" of the Golden Age including works of Lope de Vega, Calderon de la Barca, Tirso de Molina and Ruiz de Alarcon. Instruction is in Spanish. **Prerequisite(s):** SPAN 335

SPAN 427. Poetry of the Golden Age

Credits 3.00 PeopleSoft Course ID 011169 Grading Basis GRD

Lecture and analysis of Spanish poetry beginning with the Renaissance through the end of the 17th Century. The course will cover poets such as Garcilaso de la Vega, Fray Luis de Leon, and San Juan de la Cruz. Instruction in Spanish.

Prerequisite(s): SPAN 335

SPAN 428. Don Quixote

Credits 3.00 PeopleSoft Course ID 012464 Grading Basis GRD

Examination of Cervantes's two-part novel, which some have named the first modern novel or the greatest novel of all time. Includes study of the book's literary and social context, analysis of narrative techniques and levels of fiction, and major critical approaches to the work across the centuries. Instruction is in Spanish. **Prerequisite(s):** SPAN 335 or permission of the instructor.

SPAN 430. Advanced Business Spanish

Credits 3.00 PeopleSoft Course ID 013282 Grading Basis GRD

This course presents advanced business and commercial Spanish vocabulary and terminology. By focusing on topics such as the origin of business and companies, company constitution and organization, human resources, labor law and commercial law, marketing, products, services, and the sale of consumer goods, students compare the business environment of Latin America with that of the United States. **Prerequisite(s):** SPAN 330.

SPAN 434. Advanced Studies in Latin American Literature in Translation

Cross listed with: ENG 434

Credits 3.00 PeopleSoft Course ID 012062 Grading Basis GRD

This course will study Latin American literature in translation. The course will focus on the work of major Spanish American authors.

SPAN 435. Translation Strategies

Credits 3.00 PeopleSoft Course ID 012157 Grading Basis GRD

This course discusses aspects of translation theory such as skopos, translation loss, translation gain, and language bias. Students learn several translation strategies at the phrase and sentence levels and practice these strategies thoroughly before investigating terminology, terminology mining and terminology management. Instruction is in English and Spanish.

Prerequisite(s): SPAN 300.

SPAN 436. Introduction to Interpretation

Credits 3.00 PeopleSoft Course ID 012313 Grading Basis GRD

This course presents an overview of the interpreting profession. It introduces students to the main techniques they need to become competent interpreters in the various sectors of interpreting. Instruction is given in English and Spanish.

Prerequisite(s): SPAN 300.

SPAN 439. Major Authors of Literature in Spanish in Translation

Cross listed with: ENG 439

Credits 3.00 PeopleSoft Course ID 012177 Grading Basis GRD

This course will study the work of both Peninsular and Latin American authors in translation. The course will focus on major Spanish speaking authors and their work, both in Latin America and in Spain. May be repeated as course content changes.

SPAN 446. Special Topics in Spanish Literature

Credits 3.00 PeopleSoft Course ID 008162 Grading Basis GRD

Study of a particular topic in Spanish literature. It may cover all or specific Spanish literature genre. Course may be repeated if content varies.

Prerequisite(s): SPAN 335.

SPAN 446S. Special Topics in Spanish Literature - Salamanca

Credits 3.00 PeopleSoft Course ID 007104 Grading Basis OPT

Study of a particular topic in Spanish literature. It may cover all or specific Spanish literature genre. **Prerequisite(s):** SPAN 335. *Studies Abroad-Salamanca.*

SPAN 447. Special Topics in Spanish Culture

Credits 3.00 PeopleSoft Course ID 012397 Grading Basis GRD

Students will study a particular topic in the culture of Hispanic countries.

Course may be repeated if content varies. **Prerequisite(s):** SPAN 320 or SPAN 321 or permission of the instructor.

SPAN 448. Special Topics in Spanish Linguistics

Credits 3.00 PeopleSoft Course ID 012398 Grading Basis GRD

Students will study a particular topic in Spanish linguistics. Topics could include an introduction to Spanish sociolinguistics and psycholinguistics. Course may be repeated if content varies. **Prerequisite(s):** SPAN 320 or SPAN 321 or permission of the instructor.

SPAN 455. Women in Hispanic Literatures

Credits 3.00 PeopleSoft Course ID 012964 Grading Basis GRD

Study of women in literature in the Hispanic world. Focus on women authors, female characters in literature or both. The course may include works from Spain or Latin America from any time period. Examination of feminist literary criticism, canon formation and other critical topics. Emphasis may vary according to the instructor. Instruction is in Spanish. **Prerequisite(s):** SPAN 335.

SPAN 461. Post War Literature in Spain

Credits 3.00 PeopleSoft Course ID 013649 Grading Basis GRD

Reading and analysis of representative works of Spanish novelists and their development after the Civil War in Spain. Emphasis on Spanish history and society under the influence of Franco's Regime. Instruction is in Spanish.

Prerequisite(s): SPAN 335

SPAN 462. Spanish Comic Theater of the 20th Century

Credits 3.00 PeopleSoft Course ID 013030 Grading Basis GRD

The course will study the work of the main playwrights of the comic theater of 20th century Spain and their type of humor: Carlos Arniches, the brothers Alvarez Quintero, Pedro Munoz Seca, Enrique Jardiel Poncela and Miguel Mihura. Instruction is in Spanish. **Prerequisite(s):** SPAN 335.

SPAN 465. Cinema and Literature

Credits 3.00 PeopleSoft Course ID 011170 Grading Basis GRD

Studies of the structure of the cinema and its relation to literature. Comparison between different literary works and their interpretation in cinema. The course will cover topics in Spain and Latin America. Instruction in Spanish.

Prerequisite(s): SPAN 335.

SPAN 465S. Cinema and Literature

Credits 3.00 PeopleSoft Course ID 011624 Grading Basis GRD

Comparative studies between cinema and literature. May be used for general education credit. **Prerequisite(s):** SPAN 335. *Studies Abroad-Salamanca.*

Corequisite(s): SPAN 335.

SPAN 470. Advanced Legal Spanish

Credits 3.00 PeopleSoft Course ID 013371 Grading Basis GRD

This course will study the difference between national and international law and legal systems, as well as law and its origins and moral and justice concepts in society and among legislators. Intergovernmental organizations such as United Nations, International Labor Organization and International Court of Justice will be examined. Human rights and related violations and government actions in conflict resolutions will be discussed. Instruction in Spanish. **Prerequisite(s):** SPAN 300.

SPAN 476. Culture and Medicine in Latin America

Credits 3.00 PeopleSoft Course ID 012312 Grading Basis GRD

This course enables students to acquire greater linguistic proficiency and cultural competence in the medical context through classroom discussions and reading comprehension. Students analyze how different kind of inequalities (e.g., gender, racial, economic, etc.) affect health care in Latin American countries; examine popular and religious beliefs applied to medicine in Latin America; and research a medical challenge or success in a specific Latin American or Caribbean country. **Prerequisite(s):** SPAN 365.

SPAN 477. Culture and Medicine in Spain

Credits 3.00 PeopleSoft Course ID 013727 Grading Basis GRD

This course enables students to acquire greater linguistic proficiency and cultural competence in the medical context through classroom discussions and reading comprehension. Students analyze historical and contemporary medical discoveries and discuss alternative and popular medicine applied to medicine in Spain. **Prerequisite(s):** SPAN 300. *Studies Abroad-Salamanca.*

SPAN 478. Spanish for Medical Professionals III

Credits 3.00 PeopleSoft Course ID 014433 Grading Basis GRD

This course will help develop students' clinical language abilities in Spanish. Students will learn advanced medical Spanish vocabulary, common health issues that affect Hispanic communities and aspects of Latinx cultures relative to health care. Students will also learn about health disparities affecting this population in connection to different social, economic and political determinants. This class will prepare students to work and communicate better with Hispanic patients in various health contexts by providing them with role-play scenarios in diverse health centers. **Prerequisite(s):** SPAN 375.

SPAN 484. Advanced Studies in Spanish and Italian Literature

Credits 3.00 PeopleSoft Course ID 014237 Grading Basis GRD

From the Renaissance to the Siglo de Oro, this course will explore the influences between Spanish and Italian literature, from the Early modern period to the Baroque. It will mainly investigate three main genres: Poetry, narrative and drama. It will include a selection of texts by prominent Italian and Spanish authors such as Petrarch, Boccaccio, Garcilaso de la Vega, Machiavelli, Cervantes, Lope de Vega. Instruction is in English. **Prerequisite(s):** *Permission of the instructor.*

SPAN 485. Business and Society in Latin America

Cross listed with: SPAN 485S

Credits 3.00 PeopleSoft Course ID 012317 Grading Basis GRD

This course explores the development of Latin American society in the business and economic contexts and investigates areas such as importation and exportation, the health and education systems, banking and financial institutions, agriculture, and the textile, fashion, wine, motion picture, music, and media industries. **Prerequisite(s):** SPAN 300.

SPAN 485S. Business and Society in Latin America

Cross listed with: SPAN 485

Credits 3.00 PeopleSoft Course ID 012317 Grading Basis GRD

This course explores the development of Latin American society in the business and economic contexts and investigates areas such as importation and exportation, the health and education systems, banking and financial institutions, agriculture, and the textile, fashion, wine, motion picture, music, and media industries. **Prerequisite(s):** *Studies Abroad-Salamanca.*

SPAN 486. Business and Society in Spain

Credits 3.00 PeopleSoft Course ID 013308 Grading Basis GRD

This course investigates several sectors of the Spanish economy, including the food industry, industrial port activity, importation and exportation, the petrochemical industry, the leisure industry, and the wine making industry. Students tour several important multinational companies in Salamanca, Spain, and attend presentations given in Spanish by staff of those companies. This course is taught in Salamanca, Spain. **Prerequisite(s):** SPAN 300. *Studies Abroad-Salamanca.*

SPAN 490. Special Studies in Spanish

Credits 1.00 - 3.00 PeopleSoft Course ID 004190 Grading Basis GRD

Allows students an opportunity to complete independent studies under faculty supervision. **Prerequisite(s):** *Permission of the department head.*

SPAN 490S. Special Studies in Spanish -Salamanca

Credits 3.00 PeopleSoft Course ID 001548 Grading Basis GRD

This course gives students the opportunity to integrate in the Spanish society through a JMU sponsored internship/field experience. Students will have the chance to work in local schools and businesses. The experience will allow students to interact with the community through conversation and their assigned responsibilities. **Prerequisite(s):** *Studies Abroad-Salamanca.*

SPAN 490T. Sp St Spanish Art - Salamanca

Credits 3.00 PeopleSoft Course ID 001077 Grading Basis GRD

A study of the art and architecture of Spain from medieval times through the present. Concentration on specific artists as well as general movements in the history of Spanish art. ARTH 414 meets liberal studies requirement.

Prerequisite(s): *Studies Abroad-Salamanca.*

SPAN 492. Latinx Community Practicum

Credits 3.00 PeopleSoft Course ID 011533 Grading Basis GRD

This course gives students the opportunity to collaborate with the local Spanish-speaking community through semester placements in schools or service agencies. Students will develop a better understanding of the Hispanic culture as well as immigration issues affecting the community. **Prerequisite(s):** SPAN 320 or SPAN 321.

SPAN 493. Business Spanish Internship

Credits 3.00 PeopleSoft Course ID 014340 Grading Basis GRD

This course gives students the opportunity to practice the theoretical knowledge, linguistic skills and cross-cultural competencies learned in SPAN 330. With permission of the business Spanish minor coordinator, students work as volunteers or interns in the public service, private industry or business management sector, locally or abroad. Faculty-supervised course work required for completion: monthly reports (3), final paper (reflections/lessons learned) and presentation, and performance evaluation by agency or organization. **Prerequisite(s):** SPAN 330.

SPAN 494. Practical Medical Spanish

Credits 3.00 PeopleSoft Course ID 013307 Grading Basis GRD

This course allows JMU students who have completed SPAN 365 to practice the linguistic and cultural skills from basic medical Spanish in real-life medical

situations. Students have the option to find their own internship or volunteer to work locally or abroad with the permission of the coordinator of the minor in medical Spanish. Alternately, students can complete the course NSG 490 in Costa Rica or Tarragona, Spain. **Prerequisite(s):** SPAN 365.

SPAN 495. Practical Spanish for Public Safety/Legal Spanish

Credits 3.00 PeopleSoft Course ID 013305 Grading Basis GRD

This course focuses on Spanish for public safety, law enforcement, and the judicial/legal system in collaboration with local and state agencies and the Spanish-speaking community. Students consolidate their theoretical knowledge, gain confidence in the language, and observe both the direct impact of their learning and the critical role of language proficiency in today's increasingly diverse society. **Prerequisite(s):** SPAN 300.

SPAN 496. Translation/Interpreting Internship

Credits 3.00 PeopleSoft Course ID 013638 Grading Basis GRD

Practical experience in translation or interpretation within a public agency, nonprofit organization or private business. Periodical reports and a final paper are required for the course. The student will be supervised by a faculty member. **Prerequisite(s):** SPAN 435 or SPAN 436 or permission of the instructor.

SPAN 498. The Generation of 1898

Credits 3.00 PeopleSoft Course ID 014093 Grading Basis GRD

This course examines major Spanish writers who engaged with their nation's defeat in the 1898 Spanish-American War. Students will read, analyze and discuss works from Azorín, Pío Baroja, Valle-Inclán, Antonio Machado, Maeztu and Unamuno. This group of intellectuals varied in their writing styles but shared a broad commitment to the cultural and aesthetic renewal of Spain.

Prerequisite(s): SPAN 335

SPAN 499A. Honors

Credits 1.00 PeopleSoft Course ID 004123 Grading Basis GRD

SPAN 499B. Senior Honors Project

Credits 3.00 PeopleSoft Course ID 005347 Grading Basis GRD

SPAN 499C. Senior Honors Project

Credits 2.00 PeopleSoft Course ID 007673 Grading Basis GRD

Sport and Recreation Management

SRM 202. Foundations of Leadership in Sport and Recreation Management

Credits 3.00 PeopleSoft Course ID 012538 Grading Basis GRD

An introduction to the basis for the professions that make up Sport and Recreation Management. A focus on these professions in governmental, voluntary, private and commercial settings is incorporated. Finally both the economical significance and the professional preparation for success in the industry are introduced and practiced. **Prerequisite(s):** SRM major or permission of the director.

SRM 240. Sport and Recreation Management Seminar

Credits 3.00 PeopleSoft Course ID 013895 Grading Basis GRD

This course is for students to learn the business skills required for success in the sport and recreation management industry. Students will evaluate and analyze multiple critical thinking approaches and conflict management and negotiation skills, as well as customer service models, entrepreneurial theories and practices, and concepts within the industries of sport and recreation.

Prerequisite(s): SRM majors only.

SRM 241. Introduction to Sport and Recreation Management

Credits 3.00 PeopleSoft Course ID 008528 Grading Basis GRD

Introduces the sport and recreation management professions in governmental, voluntary, private, public and commercial settings. Outlines development of sport and recreation and the evolution of the mega-leisure industry. Overviews

professional preparation in sport and recreation management. **Prerequisite(s):** Declared SRM major.

SRM 242. Sociology and Psychology of Sport and Recreation

Credits 3.00 PeopleSoft Course ID 013066 Grading Basis GRD

The primary purpose of this course is to investigate sport and recreation related activities and services from a sociological and psychological perspective. The focus will be on activity through the lifespan and using theory and current issues from both disciplines to aid the practitioner in their interactions with participants and constituents and with the development and management of sport and recreation related activities and services. **Prerequisite(s):** Declared SRM major or disabilities studies minor.

SRM 282. Practicum in Sport and Recreation

Credits 3.00 PeopleSoft Course ID 013065 Grading Basis CNC

A sequence of selected practicum experiences which provides the student with supervised practicum experience in Sport and Recreation Management.

Prerequisite(s): SRM 241

SRM 298. Special Studies in Sport and Recreation Management

Credits 3.00 PeopleSoft Course ID 013451 Grading Basis GRD

A special studies course designed to explore areas of current topical concern in sport and recreation environments. **Prerequisite(s):** SRM Major, Instructor Permission, and Departmental Permission

SRM 330. History of Sport and Recreation

Credits 3.00 PeopleSoft Course ID 013920 Grading Basis GRD

This course covers the development of sports and recreational activities and their significance in American life from colonial times to the present. It is designed both to supplement students' understanding of American history and to examine the role that sports and recreational activities have played in shaping contemporary society.

SRM 333. Management in Sport and Recreation

Credits 3.00 PeopleSoft Course ID 007155 Grading Basis GRD

This course will provide students with the knowledge to apply the management principles and theories to specific professional organizations in the sport and recreation industry. Sport and recreation management applications covered include administration principles for specific organizations, human resource management, fiscal management, marketing, and risk management.

Prerequisite(s): SRM 241

SRM 334. Introduction to Sport Media

Credits 3.00 PeopleSoft Course ID 013075 Grading Basis GRD

Examination of the knowledge and skills required for the business of sports communications, including strategic and personal communications, leadership, publishing, advertising, public relation and crisis management. The course also examines sport communications from a sociological and legal perspective and the emergence of online sport communication and the new sport media.

Prerequisite(s): SRM 241.

SRM 337. Programming and Assessment in Sport and Recreation Management

Credits 3.00 PeopleSoft Course ID 013161 Grading Basis GRD

This course will examine the basics of sport and recreation programming and assessment. Students will be presented with tools and strategies for developing and assessing programs and evaluating their outcomes. Students will learn how to program for agencies of various sizes with an understanding of the importance of recognizing service population needs. **Prerequisite(s):** SRM 241

SRM 434. Ethical and Legal Issues in Sport and Recreation Management

Credits 3.00 PeopleSoft Course ID 012315 Grading Basis GRD

This course is designed to introduce students to current ethical and legal issues of concern to professionals in sport, recreation and leisure studies.

Students will examine the impact of these issues on organizational and managerial policies and decision-making. **Prerequisite(s):** SRM 333.

SRM 435. Sport Marketing and Sales

Credits 3.00 PeopleSoft Course ID 013198 Grading Basis GRD

This course will examine how promotional activities and sales efforts are closely intertwined and impact the success or failure of the sport and leisure industry. Particular emphasis will be placed on ticket sales and sport sponsorship. **Prerequisite(s):** SRM 333.

SRM 436. Facilities and Event Management

Credits 3.00 PeopleSoft Course ID 002014 Grading Basis GRD

This course is designed to explore the principles of planning, design, and management of selected sport, recreation, and exercise facilities. The course will also cover the planning and management of special events. This will include budgeting, design, staffing, evaluation/assessment, crowd management and relative human resource management. **Prerequisite(s):** SRM 333.

SRM 438. Human Resources in Sport and Recreation Management

Credits 3.00 PeopleSoft Course ID 013199 Grading Basis GRD

An overview of human resource management and development in sport and recreation environments. This course will provide an introduction to administrative practices involving employer and employee relationships and an application of these concepts to day to day management duties. Course focus will be policies, legal issues, recruiting, hiring, job analysis, creating position descriptions, evaluation, training, development and supervision of staff members and volunteers. **Prerequisite(s):** SRM 333.

SRM 482. Internship in Sport and Recreation Management

Credits 6.00 PeopleSoft Course ID 006336 Grading Basis CNC

This full-time professional experience affords the opportunity to apply theory and methodology under qualified supervision from the cooperating agency and the university. While enrolled in this course, students may take up to one additional course without permission and a second course with permission. The second additional course must be approved in advance by the SRM internship coordinator. All internship sites must be approved by the SRM practicum and internship coordinator. **Prerequisite(s):** SRM 282, SRM 333 and 72 credit hours completed.

SRM 490. Special Studies in Sport and Recreation Management

Credits 3.00 PeopleSoft Course ID 013414 Grading Basis GRD

Designed to give capable students in Sport and Recreation Management an opportunity to complete independent study under faculty supervision.

Prerequisite(s): SRM major and permission of the director.

SRM 498. Special Topics in Sport and Recreation Management

Credits 3.00 PeopleSoft Course ID 013415 Grading Basis GRD

This course is designed to allow explorations of areas of current topical concern, or to exploit special situations. Course content will vary. For current course content consult your adviser or the SHSRM Director. **Prerequisite(s):** SRM major and permission of the director.

SRM 499A. Honors

Credits 1.00 PeopleSoft Course ID 013709 Grading Basis GRD

See catalog description entitled "Graduation with Distinction" and "Graduation with Honors." **Prerequisite(s):** Permission of the director.

SRM 499B. Honors

Credits 3.00 PeopleSoft Course ID 013710 Grading Basis GRD

See catalog description entitled "Graduation with Distinction" and "Graduation with Honors." **Prerequisite(s):** Permission of the director.

SRM 499C. Honors

Credits 2.00 PeopleSoft Course ID 013711 Grading Basis GRD

See catalog description entitled "Graduation with Distinction" and "Graduation with Honors." **Prerequisite(s):** Permission of the director.

Swahili

SWA 101. Elementary Swahili I

Credits 3.00 - 4.00 PeopleSoft Course ID 012496 Grading Basis GRD

The fundamentals of Swahili through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in language laboratory. Student will receive no credit for course if he/she has had two or more years of the language in high school.

SWA 102. Elementary Swahili II

Credits 3.00 - 4.00 PeopleSoft Course ID 012497 Grading Basis GRD

The fundamentals of Swahili through listening, speaking, reading and writing. Practice in pronunciation and development of comprehension. One hour's work a week in the language laboratory. If student has had two or more years of the language in high school he/she will not receive credit for the course.

SWA 111. Intensive Swahili

Credits 6.00 PeopleSoft Course ID 013031 Grading Basis GRD

The fundamentals of Swahili through listening, speaking, reading and writing. The course is the equivalent of SWA 101-SWA 102.

SWA 212. Intensive Swahili II

Credits 6.00 PeopleSoft Course ID 013032 Grading Basis GRD

The fundamentals of Swahili through listening, speaking, reading and writing. The course is the equivalent of SWA 231 - SWA 232. **Prerequisite(s):** SWA 102 or SWA 111 or permission of the instructor.

SWA 231. Intermediate Swahili I

Credits 3.00 PeopleSoft Course ID 013033 Grading Basis GRD

A thorough review of first year grammar and vocabulary building. Conversation, composition and readings will be chosen to reach competency at the lower intermediate level Swahili. **Prerequisite(s):** SWA 102, SWA 111 or permission of the instructor

SWA 232. Intermediate Swahili II

Credits 3.00 PeopleSoft Course ID 013034 Grading Basis GRD

A thorough review of Swahili grammar and vocabulary building. Conversation, composition and readings will be chosen to reach competency at the advance intermediate level. **Prerequisite(s):** SWA 231 or permission of the instructor

SWA 300. Grammar and Communication

Credits 3.00 PeopleSoft Course ID 013114 Grading Basis GRD

Intensive training in grammatical structures and their application to oral and written communication. Instruction is in Swahili. Fulfills the College of Arts and Letters writing-intensive requirement for the major. **Prerequisite(s):** SWA 232 or SWA 212 or permission of instructor

SWA 320. Swahili Oral and Written Communication

Credits 3.00 PeopleSoft Course ID 013115 Grading Basis GRD

Intensive training in the use of modern, everyday Swahili with emphasis on conversation and composition. Readings in Swahili will provide a context for discussion and writing. **Prerequisite(s):** SWA 300

SWA 490. Special Studies in Swahili

Credits 3.00 PeopleSoft Course ID 013035 Grading Basis GRD

Special topics or independent studies in Swahili.

Teaching English to Speakers of Other Languages

TESL 300. Introduction to Second Language Acquisition

Credits 3.00 PeopleSoft Course ID 012260 Grading Basis GRD

This course provides an overview of first and second language acquisition through the lens of education. Students are guided through an in-depth inquiry process designed to develop researcher-practitioners, an approach that is particularly critical to the promotion of educational justice.

TESL 310. Pedagogical Grammar

Credits 3.00 PeopleSoft Course ID 014205 Grading Basis GRD

This course develops skills in teaching grammar and syntax in the context of writing. Special focus will be on working with English language learners and the ability to model and teach editing skills and organization of writing using predominant text structures in the content areas.

TESL 381. Practicum in TESOL Instructional Strategies

Credits 3.00 PeopleSoft Course ID 013335 Grading Basis GRD

The course provides supervised field experiences in working with English as a Second Language students, PK-12. Preservice teachers will demonstrate competencies developed in the English as a Second Language endorsement program and in consultation with a field supervisor. **Prerequisite(s):** *Completion of ESL minor requirements.*

TESL 382. Practicum in TESOL First/2nd Language Acquisition

Credits 1.00 PeopleSoft Course ID 013148 Grading Basis GRD

This one credit practicum provides an opportunity for students to work directly with English language learners under the supervision of a mentor teacher and a University Supervisor to identify and recognize principles of first and second language acquisition as evident in classroom contexts. Content of the practicum will directly correlate with topics covered in TESL 300.

Corequisite(s): *TESL 300.*

TESL 383. Practicum in TESOL Literacy Development

Credits 1.00 PeopleSoft Course ID 013149 Grading Basis GRD

This one credit practicum provides an opportunity for students to work directly with English language learners to plan and implement oral language, reading, and writing strategies in language arts and content instruction that are directly related to topics covered in the LED 435 course. **Prerequisite(s):** *LED 366.*

Corequisite(s): *LED 435*

TESL 384. Practicum in Literacy Development

Credits 1.00 PeopleSoft Course ID 013150 Grading Basis GRD

This one credit practicum provides for pre-service teachers to work directly with students in grades PK-12 (as determined by the LED 366 instructor) on literacy development under the supervision of a mentor teacher and a University Supervisor. They plan and implement literacy strategies in language arts and content instruction directly related to LED 366 course material. Most pre-service teachers will assist Prek-5 students. **Corequisite(s):** *LED 366*

TESL 385. Practicum in TESOL

Credits 1.00-3.00 PeopleSoft Course ID 013968 Grading Basis GRD

This practicum provides an opportunity for students to apply instructional methods and practices for teaching English to speakers of other languages (TESOL) to meet the linguistic needs of multilingual learners under the supervision of a university supervisor. Content and site locations will vary depending upon the specific focus of the practicum.

TESL 421. Foundations of ESL PK-12 Collaboration

Credits 3.00 PeopleSoft Course ID 014219 Grading Basis GRD

This course is a detailed study of ESL co-teaching and other collaborative practices. The course explores the rationale for teacher collaboration to support ESL instruction; presents current, classroom-based, practitioner-oriented research studies related to co-teaching, co-planning, curriculum alignment, teacher professional development and additional collaborative practices; and

offers authentic teacher reflections and recommendations on collaboration and co-teaching. **Prerequisite(s):** *TESOL majors only.*

TESL 425. Cross-Cultural Education

Credits 3.00 PeopleSoft Course ID 014177 Grading Basis OPT

The course provides students with knowledge of the effects of socio-cultural variables in an instructional setting.

TESL 428. Language Assessment for Multilingual Learners

Credits 3.00 PeopleSoft Course ID 012261 Grading Basis GRD

This course introduces students to a variety of formative and summative assessment practices for multilingual learners. Students will become familiar with equitable assessment practices that aim to minimize cultural and linguistic biases and promote asset-based approaches.

Prerequisite(s): *TESL 300.*

TESL 470. Methods in Teaching English to Speakers of Other Languages

Credits 3.00 PeopleSoft Course ID 009252 Grading Basis GRD

This course introduces students to instructional methods and practices for teaching English to speakers of other languages (TESOL) to meet the linguistic needs of multilingual learners. Students will develop competences in selecting culturally responsive materials, integrating language and content instruction, and differentiating according to multilingual learners' language proficiency levels. **Prerequisite(s):** *TESL 300. Corequisite(s):* *TESOL minor: TESL 385; TESOL major: TESL 381.*

TESL 480. Student Teaching/Internship

Credits 5.00 PeopleSoft Course ID 013386 Grading Basis CNC

Enables students to apply skills and attitudes acquired in all components of their professional education preparation. Students design and implement instructional activities under the guidance of teaching professionals

Prerequisite(s): *PSYC 160, EDUC 310, EDUC 200, pre-professional studies and TESOL core courses. Corequisite(s):* *TESL 481.*

TESL 481. Student Teaching Seminar in TESOL

Credits 1.00 PeopleSoft Course ID 014220 Grading Basis GRD

This seminar is designed to accompany the student teaching experiences. Its purpose is to provide opportunities for student teachers to process and reflect on their experiences that occur in the classroom and school and to strengthen their professional growth. Broad topic areas include understanding of different instructional practices and implementation of a variety of lesson plans with appropriate behavior management and assessment strategies to meet the needs of English learners. Emphasis is placed on guiding student teachers from theory to the world of the professional educator by exploring their own skill levels and plans for their ongoing professional development. **Prerequisite(s):** *TESOL majors only. Corequisite(s):* *TESL 480.*

TESL 482. Field Work in Professional Development, Partnership and Advocacy Seminar

Credits 1.00 PeopleSoft Course ID 012702 Grading Basis GRD

Students examine opportunities for professional development from professional associations, universities and other organizations across PK-16. Strategies to build partnerships with colleagues, families and communities are presented. Important social and political issues affecting education of majority and minority students and models of advocacy for students and their families are presented.

Prerequisite(s): *TESL 300*

TESL 490. Special Studies in TESOL

Credits 1.00-3.00 PeopleSoft Course ID 013969 Grading Basis GRD

The course is designed to allow the student to complete an independent study in a TESOL-related area under faculty supervision. **Prerequisite(s):** *Permission of the instructor.*

Theatre

THEA 204. Theatre Practicum: Scenery

Credits 1.00 PeopleSoft Course ID 013375 Grading Basis GRD

Students will complete practical theatre assignments on main stage productions in the area of scenery. Repeatable. Prior approval required. Majors may apply a maximum of one THEA 204 or THEA 304 credit toward the major requirements and a maximum of four credit hours of THEA 204-THEA 208 or THEA 304-THEA 308 toward meeting major requirements.

THEA 205. Theatre Practicum: Lights

Credits 1.00 PeopleSoft Course ID 013376 Grading Basis GRD

Students will complete practical theatre assignments on main stage productions in the area of lighting. Repeatable. Prior approval required. Majors may apply a maximum of one THEA 205 or THEA 305 credit toward the major requirements and a maximum of four credit hours of THEA 204 -THEA 208 or THEA 304-THEA 308 toward meeting major requirements.

THEA 206. Theatre Practicum: Costumes

Credits 1.00 PeopleSoft Course ID 013377 Grading Basis GRD

Students will complete practical theatre assignments on main stage productions in the area of costumes. Repeatable. Prior approval required. Majors may apply a maximum of one THEA 206 or THEA 306 credit toward the major requirements and a maximum of four credit hours of THEA 204-THEA 208 or THEA 304-THEA 308 toward meeting major requirements.

THEA 207. Theatre Practicum: Management

Credits 1.00 PeopleSoft Course ID 013378 Grading Basis GRD

Students will complete practical theatre assignments in the area of management. Repeatable. Prior approval required. Majors may apply a maximum of one THEA 207 or THEA 307 credit toward the major requirements and a maximum of four credit hours of THEA 204-THEA 208 or THEA 304-THEA 308 toward meeting major requirements.

THEA 208. Theatre Practicum: Performance

Credits 1.00 PeopleSoft Course ID 013379 Grading Basis GRD

Students will complete practical theatre assignments on main stage productions in the area of performance. Repeatable. Prior approval required. Majors may apply a maximum of one THEA 208 or THEA 308 credit toward the major requirements and a maximum of four credit hours of THEA 204-THEA 208 or THEA 304-THEA 308 toward meeting major requirements.

THEA 210. Introduction to Theatre [C2VPA]

Credits 3.00 PeopleSoft Course ID 009039 Grading Basis GRD

Study of the theatre as an art form. Emphasis on introducing students to a broad spectrum of theatrical activity and opinion. Consideration of the components that comprise a theatre event including acting, directing, design, costuming, lighting and playwriting. May be used for general education credit. May not be used for major credit.

THEA 211. Performance Analysis

Credits 3.00 PeopleSoft Course ID 010209 Grading Basis GRD

Plays are examined as texts for performance. Theories of performance and methods for the analysis of performances in and out of the theater are studied.

Prerequisite(s): *Theatre and musical theatre majors and theatre minors, American studies minors and creative writing minors only.*

THEA 251. Acting I: Basic Acting

Credits 3.00 PeopleSoft Course ID 002720 Grading Basis GRD

A study of basic acting as a performance experience. Emphasis on fundamentals of performance including concentration, transitions, interaction and the structuring of action.

THEA 253. Musical Theatre Laboratory

Credits 1.00 PeopleSoft Course ID 013391 Grading Basis GRD

Introduction to issues related to Musical Theatre through music and text analysis, vocal technique, and practice of the repertoire. Topics relating to vocal and physical health, professional practice, and musical theatre resources will also be covered. May be repeated once for credit. **Prerequisite(s):** *Musical theatre majors only.*

THEA 261. Voice for the Stage

Credits 3.00 PeopleSoft Course ID 005533 Grading Basis GRD

Theories and exercises designed to equip the student with proper speech for the stage through a fundamental understanding of phonetics and articulation.

Prerequisite(s): *THEA 251.*

THEA 271. Technical Theatre

Credits 3.00 PeopleSoft Course ID 005270 Grading Basis GRD

Study of the technical aspects of stage production. Emphasis upon practical experience in the use of stage and shop facilities. Consideration of the physical theater and stage, construction, painting and rigging of scenery as applied to theatrical production. **Prerequisite(s):** *STAD 171.*

THEA 273. Design Aspects of Performance

Credits 3.00 PeopleSoft Course ID 008559 Grading Basis GRD

Study of the interrelationship between the playwright, director and actor with the scenic, lighting and costume designers; introduction of the basic documents of the design process; survey of current and historical trends in theatrical design; no artistic or technical skills necessary.

THEA 281. Movement for the Actor

Credits 3.00 PeopleSoft Course ID 013155 Grading Basis GRD

Students in this course develop and refine movement skills for stage performance. Through a study of approaches, such as Viewpoints, Animal Work, and Laban Techniques, students develop methods of artistic expression using their body. Through movement, students discover new connections to speech and text and improve the condition, flexibility, and responsiveness of their physical instrument. Students also develop the means for making effective physical choices in the creation of a performance. **Prerequisite(s):** *THEA 251 .*

THEA 303. Topics in Theater

Credits 1.00 - 3.00 PeopleSoft Course ID 003222 Grading Basis GRD

Study of current topics and issues in theater. Emphasis on contemporary themes of immediate concern.

THEA 304. Theatre Practicum: Scenery

Credits 1.00 PeopleSoft Course ID 013384 Grading Basis GRD

Students will complete practical theatre assignments on main stage productions in the area of scenery. Repeatable. Prior approval required. Majors may apply a maximum of one THEA 204 or THEA 304 credit toward the major requirements and a maximum of four credit hours of THEA 204-THEA 208 or THEA 304-THEA 308 toward meeting major requirements.

THEA 305. Theatre Practicum: Lights

Credits 1.00 PeopleSoft Course ID 013380 Grading Basis GRD

Students will complete practical theatre assignments on main stage productions in the area of lighting. Repeatable. Prior approval required. Majors may apply a maximum of one THEA 205 or THEA 305 credit toward the major requirements and a maximum of four credit hours of THEA 204-THEA 208 or THEA 304-THEA 308 toward meeting major requirements.

THEA 306. Theatre Practicum: Costumes

Credits 1.00 PeopleSoft Course ID 013381 Grading Basis GRD

Students will complete practical theatre assignments on main stage productions in the area of costumes. Repeatable. Prior approval required. Majors may apply a maximum of one THEA 206 or THEA 306 credit toward the major

requirements and a maximum of four credit hours of THEA 204-THEA 208 or THEA 304-THEA 308 toward meeting major requirements.

THEA 307. Theatre Practicum: Management

Credits 1.00 PeopleSoft Course ID 013382 Grading Basis GRD

Students will complete practical theatre assignments in the area of management. Repeatable. Prior approval required. Majors may apply a maximum of one THEA 207 or THEA 307 credit toward the major requirements and a maximum of four credit hours of THEA 204-THEA 208 or THEA 304-THEA 308 toward meeting major requirements.

THEA 308. Theatre Practicum: Performance

Credits 1.00 PeopleSoft Course ID 013383 Grading Basis GRD

Students will complete practical theatre assignments on main stage productions in the area of performance. Repeatable. Prior approval required. Majors may apply a maximum of one THEA 208 or THEA 308 credit toward the major requirements and a maximum of four credit hours of THEA 204-THEA 208 or THEA 304-THEA 308 toward meeting major requirements.

THEA 315. World Theatre Histories, Texts and Performances I

Credits 3.00 PeopleSoft Course ID 011261 Grading Basis GRD

Study of world theatre from its Origins to the Seventeenth Century. The class explores how theatre has been created and consumed in diverse settings around the globe, with particular emphasis given to dramatic texts and performance traditions, as well as critical, literary, and performance theories. Includes study of theatre architecture and production design; political, social, intellectual, and aesthetic contexts of performances, and the theory and history of acting across time and place. **Prerequisite(s):** THEA 211

THEA 316. World Theatre Histories, Texts and Performances II

Credits 3.00 PeopleSoft Course ID 009586 Grading Basis GRD

This course is a study of world theatre from the seventeenth to early twentieth century. The class explores how theatre has been created and consumed in diverse settings around the globe, with particular emphasis given to dramatic texts and performance traditions, as well as critical, literary and performance theories. Includes study of theatre architecture and production design; the political, social, intellectual and aesthetic contexts of performance; and the theory and history of acting across time and place. **Prerequisite(s):** THEA 211.

THEA 317. World Theatre Histories, Texts and Performances III

Credits 3.00 PeopleSoft Course ID 013971 Grading Basis GRD

This course is a study of world theatre from the early twentieth century to the present. The course explores how theatre has been created and consumed in diverse settings around the globe, with particular emphasis given to dramatic texts and performance traditions, as well as critical, literary and performance theories. Includes study of theatre architecture and production design; the political, social, intellectual and aesthetic contexts of performances; and the theory and history of acting across time and place. **Prerequisite(s):** THEA 211, THEA 315 and THEA 316.

THEA 319. Theatre Teaching Methods

Credits 3.00 PeopleSoft Course ID 014540 Grading Basis GRD

An exploration of teaching drama and theatre with children and youth in K-12 school settings. Topics include: discipline-based theatre education, drama-based pedagogy, arts integration and youth theatre workshops/programs and classrooms with a focus on community-building and social justice. This course helps students expand their skills set in lesson/workshop planning and facilitation, behavior management, as well as theatre for youth development with K-12 students.

THEA 323. Youth Theatre

Credits 3.00 PeopleSoft Course ID 014031 Grading Basis GRD

An exploration of teaching artistry, devised theatre and applied drama/theatre with youth, directing the young performer and building educational programs in schools. With an emphasis on teaching, directing and arts administration, this course examines opportunities for learning through theatre-making and theatre performance. **Prerequisite(s):** School of Theatre and Dance majors and theatre minors only and sophomore standing, or permission of the instructor.

THEA 324. Theatre for Young Audiences

Credits 3.00 PeopleSoft Course ID 011593 Grading Basis GRD

An exploration of professional theatre practices in Theatre for Young Audiences (TYA), including Theatre for the Very Young (TVY) and Theatre for Teens. With an emphasis on theatre-making, this course examines historical contexts of TYA, investigates theatre companies and practitioners and identifies applications for education, outreach and engagement. **Prerequisite(s):** School of Theatre and Dance majors only and sophomore standing, or permission of the instructor.

THEA 325. Theatre Teaching Practicum

Credits 3.00 PeopleSoft Course ID 013664 Grading Basis GRD

An advanced study of drama/theatre education focusing on professional practices, contemporary issues in education and pedagogy in practice. In addition to course work, students work closely with a cooperating teacher in a local school to observe and reflect, support instruction, and develop and facilitate lessons. **Prerequisite(s):** THEA 319 or permission of the instructor.

THEA 330. Professional Issues for Designers and Technicians

Credits 3.00 PeopleSoft Course ID 014500 Grading Basis GRD

This course is designed to provide a working comprehension of the business dynamics involved in being a working artist: portfolio and interview preparation, how to be your own marketing director, accountant, agent, publicist, assistant and financial strategist. **Prerequisite(s):** THEA 273 and one of THEA 271, THEA 332, THEA 333, THEA 336, THEA 374, THEA 376, or STAD 471; or permission of the instructor.

THEA 331. Technical Costuming

Credits 3.00 PeopleSoft Course ID 000848 Grading Basis GRD

Introduction to the technical aspects involved in building complete costume ensembles for the stage, screen and dance. Emphasis placed on experiencing unique problems in production situations, including specialized costume and accessory construction, ornamentation, fabric treatment, difficulties and alternatives in presenting historical clothing, and renovating and exploiting available materials. **Prerequisite(s):** STAD 171 and THEA 206 or THEA 306, or permission of the instructor

THEA 332. Costume and Fashion History

Credits 3.00 PeopleSoft Course ID 000171 Grading Basis GRD

A survey of Western world costume from 4000 B.C. to the present as it reflects the sociocultural and socioeconomic aspects of the times. Emphasis on the evaluation of historic costume and fashion in relation to architecture, sculpture, painting and other art forms.

THEA 333. Costume Design

Credits 3.00 PeopleSoft Course ID 002206 Grading Basis GRD

The study of basic costume design techniques for performance. Emphasis on costuming in terms of the total production concept including directorial approach, setting and lighting design. Consideration of the process of costuming a production from first production meetings to opening.

THEA 336. History, Theory and Practice of Stage Makeup

Credits 3.00 PeopleSoft Course ID 003572 Grading Basis GRD

Study of the history and practice of makeup for ceremonial and theatrical presentations of selected major cultures, from ancient Egypt to the present. Consideration given to makeup as a reflection of the social organization of each culture. Emphasis on makeup as an important element in the history of design aesthetics as well as a vital part of the performing arts.

THEA 347. Playwriting

Cross listed with: *ENG 347*

Credits 3.00 PeopleSoft Course ID 000431 Grading Basis GRD

Study of the process of writing plays. Consideration of plot, character, thematic material, conflict and dramatic structure. Emphasis on individual writing assignments. **Prerequisite(s):** *Sophomore standing or permission of the instructor.*

THEA 351. Acting II: Intermediate Acting

Credits 3.00 PeopleSoft Course ID 009153 Grading Basis GRD

Study of the fundamental theories and methods of acting. Emphasis on laboratory experience in the preparation of scenes. Consideration of various acting techniques through performance with maximum individual on-stage instruction. **Prerequisite(s):** *THEA 251 and sophomore standing.*

THEA 352. Music Theatre Performance for Theatre and Music Majors

Credits 3.00 PeopleSoft Course ID 014094 Grading Basis GRD

Introductory course exploring the fundamentals of song analysis technique. Emphasis on solo song preparation. Basic music skills and singing ability are highly recommended. This course is designed for actors and singers who are just beginning to develop their musical theatre repertoire and their capacity to integrate singing and acting techniques. **Prerequisite(s):** *THEA 251 and a theatre (School of Theatre and Dance) major or music theatre (School of Music) concentration, or permission of the instructor.*

THEA 353. Music Theatre Performance

Credits 2.00 PeopleSoft Course ID 004229 Grading Basis GRD

Introductory course exploring the fundamentals of song analysis technique in the preparation of music theatre repertory for performance. Emphasis on solo song preparation. Basic music skills and singing ability are highly recommended **Prerequisite(s):** *THEA 251 and THEA 253.*

THEA 354. Music Theatre Workshop

Credits 1.00 PeopleSoft Course ID 013036 Grading Basis GRD

The preparation of musical theatre repertory for public performance. Emphasis on the application of the tools acquired in THEA 251, THEA 353, and other theatre, music, and dance skills classes. Students may participate as a performer, or as a member of the production/ artistic team. **Prerequisite(s):** *Admission is by audition/interview only*

THEA 355. Directing for the Theatre

Credits 3.00 PeopleSoft Course ID 000218 Grading Basis GRD

Study of the principles, problems and techniques of play direction. Emphasis on historical and modern theories. Techniques of direction considered as applied to the stage and cinematography. **Prerequisite(s):** *THEA 211 THEA 251. Acting I: Basic Acting THEA 211 and THEA 251.*

THEA 357. Music Theatre History and Analysis

Cross listed with: *MUS 357*

Credits 3.00 PeopleSoft Course ID 003904 Grading Basis GRD

Survey of musical theatre genres, composers, lyricists, performers, directors and choreographers in America from 1750 to present. Includes practical study of the format of the libretto and musical score in relationship to the major musical theatre genres. Consideration of how music theatre developed from and reflected the cultural, social, and political landscape of its time.

Prerequisite(s): *Musical Theatre majors only or permission of the instructor.*

THEA 365. Dramaturgy

Credits 3.00 PeopleSoft Course ID 013967 Grading Basis GRD

Study of the skills and techniques of the dramaturg, including strategies for production dramaturgy and new work dramaturgy of both theatre and dance. Emphasis on communication, adaptation, research and analysis. Consideration of best practices for the dramaturg's collaborations with directors, choreographers, playwrights, performers, designers and audience members.

Prerequisite(s): *THEA 211 or permission of the instructor.*

THEA 371. Advanced Technical Theatre

Credits 3.00 PeopleSoft Course ID 001257 Grading Basis GRD

Advanced study of the technical aspects of stage production. Emphasis upon contemporary scenographic techniques. Consideration of construction, decoration, rigging and touring problems in theatre production. **Prerequisite(s):** *THEA 271.*

THEA 372. Scene Painting

Credits 3.00 PeopleSoft Course ID 013265 Grading Basis GRD

An introduction to the foundational techniques of scene painting, presented through a series of practical projects designed to provide students with the skills to achieve the core processes of scene painting.

THEA 373. Drafting for the Stage

Credits 3.00 PeopleSoft Course ID 013520 Grading Basis GRD

An introduction to the foundational techniques of drafting for the stage, presented through a series of 8 practical drafting projects designed to provide students the skills to produce ground plans, elevations and sections in both pencil and CAD drafting environments.

THEA 374. Stage Lighting

Credits 3.00 PeopleSoft Course ID 006166 Grading Basis GRD

Study and analysis of stage lighting. Consideration given to basic elements of electricity, electrical control and circuitry, reflection, refraction, and color. Emphasis on the lighting design and aesthetics of a theatrical production.

THEA 375. Sound Design

Credits 3.00 PeopleSoft Course ID 013037 Grading Basis GRD

Study and analysis of the aural environment for theatre. Emphasis placed on sound design process and the methods and tools available to sound designers. Consideration given to the various mediums of sound design through in class projects.

THEA 376. Scene Design

Credits 3.00 PeopleSoft Course ID 008683 Grading Basis GRD

Study and analysis of the visual elements of theatrical production. Emphasis on the principles and elements of design, drafting and rendering. Consideration of the aesthetics of stage design through specific applied projects.

THEA 382. Contemporary Theatre

Credits 3.00 PeopleSoft Course ID 002842 Grading Basis GRD

Study of post-1968 world theatre with particular attention to English and American drama. Emphasis is placed on significant drama of the last twenty-five years with discussion of trends in theatrical production and dramatic writing in recent decades. **Prerequisite(s):** *THEA 211 or permission of the instructor.*

THEA 390. Directed Projects

Credits 1.00 - 3.00 PeopleSoft Course ID 010282 Grading Basis GRD

Supervised projects related to the study of theater. Credit given for original, individual or group programs beyond the usual course offerings in theater. A suitable completed project or report is required before credit can be awarded.

Prerequisite(s): *Permission of the director.*

THEA 441. Senior Seminar in Theatre

Credits 3.00 PeopleSoft Course ID 004878 Grading Basis GRD

A capstone course during which students spend a semester researching and developing a project related to an area of study in the major. The course may also include portfolio development, career preparation, practices in the professional theatre and other theatre-related topics of interest. **Prerequisite(s):** *Theatre and musical theatre majors only and senior standing.*

THEA 442. Senior Seminar**Credits 1.00 PeopleSoft Course ID 013502 Grading Basis GRD**

A single semester seminar for students in the honors program to be taken concurrently with THEA 499C. Students spend the semester completing their honors thesis project. The course may also include portfolio development, career preparation, practices in the professional theatre and other theatre-related topics of interest. **Prerequisite(s):** *Theatre and musical theatre majors only and senior standing.* **Corequisite(s):** *THEA 499.*

THEA 447. Advanced Playwriting

Cross listed with: *ENG 447*

Credits 3.00 PeopleSoft Course ID 010811 Grading Basis GRD

An advanced workshop with emphasis on developing full-length dramatic material. **Prerequisite(s):** *THEA 347 or ENG 347, and junior standing.*

THEA 449. London Theatre**Credits 3.00 PeopleSoft Course ID 002672 Grading Basis GRD**

Study of London theater. Consideration given to current productions of classic and contemporary works. Emphasis on production elements including acting, directing, design, writing and economic considerations. **Prerequisite(s):** *Semester-in-London students only.*

THEA 451. Meisner Technique Intensive**Credits 3.00 PeopleSoft Course ID 013678 Grading Basis GRD**

Intensive study and practice of the Meisner Technique. Emphasis on the foundational steps of the technique to develop advanced listening, imaginative, and interactive skills as a means for fostering effective habits for creative freedom and improvisational spontaneity. Practice in fully doing, truthful personal investment, and honest availability to oneself and a partner within heightened circumstances. **Prerequisite(s):** *THEA 351.*

THEA 452. Acting III: Contemporary Scene Study**Credits 3.00 PeopleSoft Course ID 001985 Grading Basis GRD**

Study of advanced acting technique through the analysis, discussion, and presentation of contemporary scenes. Emphasis on developing tools to improve the pursuit of an intention, partnering, and moment-to-moment work. **Prerequisite(s):** *THEA 351 and junior standing.*

THEA 453. Acting IV: Approach to Heightened Language**Credits 3.00 PeopleSoft Course ID 003318 Grading Basis GRD**

Advanced study of script analysis and performance technique in multiple genres exploring heightened dramatic text. Exploration will be through individual and group assignments. Emphasis on practical tools including scansion, imagery work, and the translation of text into active physical choices. **Prerequisite(s):** *THEA 452.*

THEA 454. Advanced Music Theatre Performance**Credits 2.00 PeopleSoft Course ID 011947 Grading Basis GRD**

Continuation of the THEA 353 emphasizing more complex problems in music theatre performance including duets, trios, musical scenes. **Prerequisite(s):** *THEA 353.*

THEA 455. Auditioning for Musical Theatre**Credits 2.00 PeopleSoft Course ID 012724 Grading Basis GRD**

Advanced study of auditioning technique for professional musical theatre. Emphasis on developing appropriate musical theatre audition repertory.

Unions, audition formats, performance opportunities, routes to a professional career, and agents and managers will also be covered. **Prerequisite(s):** *Musical theatre major, THEA 353 and THEA 454.*

THEA 460. Auditioning and Professional Issues**Credits 3.00 PeopleSoft Course ID 012195 Grading Basis GRD**

Study of advanced audition techniques for the stage. Emphasis on the selection, scoring, and performance of monologues. Consideration of professional issues in regard to graduate-level study or professional work in performance. **Prerequisite(s):** *Theatre major performance concentrators and THEA 453.*

THEA 466. Media Performance**Credits 3.00 PeopleSoft Course ID 000381 Grading Basis GRD**

Study of the principles and techniques of dramatic performance for the camera and microphone. Emphasis on the adaptation of each student's performance and production skills to the recording and filming of narrative works. Consideration of the differing problems and potentials of stage, video and film presentations. **Prerequisite(s):** *THEA 452.*

THEA 473. Advanced Design and Rendering**Credits 3.00 PeopleSoft Course ID 010812 Grading Basis GRD**

Advanced study in design for performance through theoretical production planning. Instruction in illustration and presentation methods necessary to communicate scenery, costume and lighting designs for performance. Emphasis is placed on the collaborative interaction between the production designers and the director or choreographer towards the creation of unified design. **Prerequisite(s):** *THEA 273 and one of the following: THEA 333, THEA 374, THEA 375 or THEA 376, or permission of the instructor.*

THEA 480. Student Teaching**Credits 3.00 - 12.00 PeopleSoft Course ID 013677 Grading Basis CNC**

Enables students to apply, in the public school classrooms and the comprehensive child development programs, those skills and attitudes acquired in all components of teacher education. Under the guidance of university supervisors, students are provided activities designed to familiarize them with the classroom teacher's role. **Prerequisite(s):** *PSYC 160 and EDUC 200 or EDUC 360, appropriate methods courses and permission of the coordinator of field experiences.*

THEA 481. Theory and Performance Studies**Credits 3.00 PeopleSoft Course ID 002070 Grading Basis GRD**

Twentieth and twenty-first century theories of theater and performance are studied and performance traditions outside of Europe are examined. **Prerequisite(s):** *THEA 211.*

THEA 485. American Theatre**Credits 3.00 PeopleSoft Course ID 007939 Grading Basis GRD**

Study and analysis of the American theatre experience as presented in the dramatic literature of the country. Emphasis on basic American themes. Consideration of plays, playwrights and performers significant to the development of American theatre. **Prerequisite(s):** *THEA 211 or permission of the instructor.*

THEA 488. Alternative Performance**Credits 3.00 PeopleSoft Course ID 003757 Grading Basis GRD**

Focus on key figures of the avant-garde and experimental theatre from the late 20th and early 21st centuries. Explores the motivations, concepts and creative techniques behind innovations in post-dramatic and devised theatre. As part of developing theoretical and historical understanding, students practice different methods of devising, collaborating and conceptualizing theatrical performance, culminating in an original presentation of student work.

THEA 490. Special Studies in Theatre

Credits 1.00 - 3.00 PeopleSoft Course ID 008458 Grading Basis GRD

An independent study for students to pursue individual research under the guidance of a faculty adviser. Department consent required to enroll.

THEA 495. Internship Theatre

Credits 3.00 - 6.00 PeopleSoft Course ID 004479 Grading Basis GRD

A faculty-arranged, prepared and monitored off-campus internship program designed to provide practical experience in theatre for students preparing for careers in those areas. Department consent required to enroll.

THEA 499. Honors in Theatre

Credits 1.00 - 3.00 PeopleSoft Course ID 010127 Grading Basis GRD

Repeatable to a maximum of six credits. Offered fall and spring. Students enrolled for three credits are required to attend class meetings of THEA 441. Department consent required to enroll.

University Studies

UNST 102. Career and Academic Planning

Cross listed with: *UNST 102H*

Credits 1.00 PeopleSoft Course ID 005090 Grading Basis GRD

A course designed to prepare students for career and academic planning. Specific content includes accessing career and academic resources, career decision-making skills, and self-awareness.

UNST 102H. Career and Academic Planning

Cross listed with: *UNST 102*

Credits 1.00 PeopleSoft Course ID 005090 Grading Basis GRD

A course designed to prepare students for career and academic planning. Specific content includes accessing career and academic resources, career decision-making skills, and self-awareness. **Prerequisite(s):** *Honors Students*

UNST 150. Global Learning and Living: Madison International

Credits 1.00-3.00 PeopleSoft Course ID 013001 Grading Basis GRD

This course provides an opportunity for a diverse cohort of international and U.S. students to learn from and about each other through stimulating discussions, intercultural residence hall programs and the opportunity to participate in service learning. Repeatable up to a maximum of six credit hours.

Prerequisite(s): *Participation in the Madison International Learning Community or permission of the instructor.*

UNST 151. Making Sense of Beliefs and Values: A Guided Tour for Global Citizens

Credits 1.00-3.00 PeopleSoft Course ID 013002 Grading Basis GRD

This course explores the origin and nature of beliefs and values and how they are linked to actions, policies and practices around the world. These processes are examined through a range of big picture issues (e.g., religious, political, environmental, gender-based, cultural) that are relevant to all global citizens. Through dynamic speakers, discussions, readings, activities and lectures, this course helps students develop a deeper understanding of self, others and the larger world. Repeatable up to a maximum of six credit hours. **Prerequisite(s):** *Participation in the Madison International Learning Community.*

UNST 190. Special Topics in University Studies

Credits 1.00 - 3.00 PeopleSoft Course ID 014069 Grading Basis GRD

Special topics course with topics approached from a variety of academic perspectives. Designed for lower-level elective credit. **Prerequisite(s):** *Permission of the instructor.*

UNST 250. Alternative Break Leadership Training

Credits 2.00 PeopleSoft Course ID 013399 Grading Basis GRD

A leadership training curriculum that covers a broad range of topics essential to leading an alternative break trip. This course incorporates service learning

pedagogy. This will be accomplished through the use of affective and cognitive approaches. Personal growth as it relates to core concepts of leadership will be prominent. Emphasis is also placed on peer interaction, active participation, extensive reading, case work and a range of guest speakers. Attendance is required. **Prerequisite(s):** *Permission of the instructor.*

UNST 251. Alternative Break Leadership Practicum

Credits 1.00 PeopleSoft Course ID 013657 Grading Basis GRD

Hands-on practicum of leadership strategies and techniques. Collaborative learning is enhanced when students apply what they learn in class by describing relevant lessons learned through experiences outside the classroom. The focus of this course is to provide students with the opportunity to lead in an observed setting and receive constant feedback and mentoring on their demonstrated leadership skills, critical reflection, inquiry, dialogue, and group interaction. **Prerequisite(s):** *UNST 250.*

UNST 300. Integrative General Education [C1CT]

Credits 3.00 PeopleSoft Course ID 014070 Grading Basis GRD (Repeatable)

This innovative topics course is designed to meet the General Education program's learning outcomes for critical and integrative thinking by providing opportunities for students to synthesize prior learning and apply it to solve contemporary real-world problems. Students complete a portion of the class assignments in teams to develop essential real-world skills in collaboration and communication. Topics vary by instructor. May be repeated when course content changes.

UNST 307. Peer Education and Facilitation Studies

Credits 2.00 PeopleSoft Course ID 013831 Grading Basis GRD

UNST 307 is a two-credit course designed to provide students with skills and knowledge to be effective peer educators. Students will receive health and identity content knowledge while increasing their group facilitation, presentation and processing skills.

UNST 389. Campus Health Communication

Credits 2.00 PeopleSoft Course ID 013832

This course provides students an opportunity to learn about, create and communicate messages about health and wellness topics. Students develop the content produced in the campus publication Potty Mouth. Students develop skills in media literacy, self-directed learning and systems thinking, and they create media products. Through group discussion and interviews, students learn how to effectively communicate health behaviors to their peers.

UNST 390. Special Studies in University Studies

Credits 1.00 - 3.00 PeopleSoft Course ID 013640 Grading Basis GRD

Designed to give students an opportunity to complete independent study and/or research under faculty supervision in university studies. **Prerequisite(s):** *Permission of the instructor*

UNST 398. Practicum in University Studies

Credits 1.00-3.00 PeopleSoft Course ID 013730

Selected practicum experiences, which provide students with supervised practicum experiences. **Prerequisite(s):** *Permission of the instructor.*

UNST 475. Dollars and Sense

Credits 3.00 PeopleSoft Course ID 012725 Grading Basis GRD

This practical course will review the affect a personal philosophy on money, and management of personal finances, has on all aspects of life when it comes to securing the American Dream. Students will learn real life skills in the areas of eliminating debt, creating a budget, understanding investments and insurance, saving money, planning for retirement, shopping for a house and other topics dealing with financial issues faced in daily life.

UNST 480. Internship Preparation, Participation and Professionalism

Credits 1.00-3.00 PeopleSoft Course ID 013833

This course provides preparation and support during and reflection after internship experiences in a variety of disciplines. It will cover the internship experience, professionalism, networking and reflection. Open to all majors for elective credit. **Prerequisite(s):** *Permission of the instructor.*

UNST 490. Advanced Special Studies in University Studies

Credits 1.00 - 3.00 PeopleSoft Course ID 013729 Grading Basis GRD

Exploration of a significant topic in depth. **Prerequisite(s):** *Permission of the instructor*

UNST 498. Internship in University Studies

Credits 1.00 - 6.00 PeopleSoft Course ID 013571 Grading Basis GRD

The course allows students to receive academic credit for work experienced in an agency or organization related to university studies. **Prerequisite(s):** *Permission of the instructor.*

Vocational Education

VOED 383. Curriculum & Instructional Procedures in Vocational Education

Credits 3.00 PeopleSoft Course ID 005844 Grading Basis GRD

The study and development of techniques and methods to provide vocational education instruction to secondary school students. Competencies to be developed will include planning for instruction, applying different methodologies, and assessing student performance and progress. The relationship of vocational education to other curricular areas will also be addressed.

Women's, Gender and Sexuality Studies

WGSS 200. Introduction to Women's, Gender and Sexuality Studies [C5SD]

Credits 3.00 PeopleSoft Course ID 008115 Grading Basis GRD

Interdisciplinary introduction to theories and scholarship in Women's, Gender and Sexuality Studies. Examines the social construction of gender, how gender affects access to opportunity, and the experiences and contributions of women throughout history. Provides a foundation for subsequent work in the women's, gender, and sexuality studies minor.

WGSS 300. Special Topics in Women's, Gender and Sexuality Studies

Credits 3.00 PeopleSoft Course ID 012188 Grading Basis GRD

Examination of selected topics of importance to the field of women's, gender and sexuality studies.

WGSS 301. Feminist Blogging: Writing for Shout Out! JMU

Cross listed with: *SCOM 301*

Credits 3.00 PeopleSoft Course ID 014028 Grading Basis GRD

The goal of this course is to work in a feminist collective to write daily blog posts for the Shout Out! JMU blog. Students will organize the blog, research and write blog posts, publicize the blog, and create dialogue by commenting on one another's blog posts as a means of consciousness raising.

WGSS 302. Third Wave Ecofeminism

Cross listed with: *SCOM 302*

Credits 3.00 PeopleSoft Course ID 013658 Grading Basis GRD

This course explores the historically strong association between women and nature, in which the image of Mother Earth is central, and critiques the power-as-domination assumption of our culture shown in the exploitation of women and of the earth itself. Religious, psychological, social, historical and scientific manifestations of this assumption will be examined, along with alternative models of power and responsibility. Students will explore the considerable research on ecofeminism.

WGSS 305. Theories and Methods in Women's, Gender and Sexuality Studies

Credits 3.00 PeopleSoft Course ID 014283 Grading Basis GRD

This course introduces students to interdisciplinary theories and methods informing scholarship in women's, gender and sexuality studies.

WGSS 315. Transnational Feminisms

Credits 3.00 PeopleSoft Course ID 014284 Grading Basis GRD

This multidisciplinary course explores the complex issues that women and LGBTQ communities encounter in non-Western regions of the world. May be focused regionally or topically drawing on multiple disciplinary perspectives.

WGSS 325. Gender and Violence

Credits 3.00 PeopleSoft Course ID 012374 Grading Basis GRD

This course explores the public nature of private violence, specifically violence committed against women in U.S. culture. Students will investigate the social, political and personal meaning of violence within a gendered context.

Throughout the course students will analyze the ways in which demographic, social, cultural, economic and political factors teach us to think about women in violent terms as well as help perpetuate violence against women. Students will consider violence not only in its physical dimension, but also in its symbolic and structural manifestations. Students will also examine the ways in which ideas about race, ethnicity, class and sexuality affect the degree and types of violence committed against women.

WGSS 337. Sociology of Gender

Cross listed with: *SOCI 337*

Credits 3.00 PeopleSoft Course ID 002258 Grading Basis GRD

Examination of theories of sex role development, the roles of men and women in society and gender as a social construction.

WGSS 341. Gender and Justice

Cross listed with: *JUST 341*

Credits 3.00 PeopleSoft Course ID 011915 Grading Basis GRD

This course is an interdisciplinary examination of the causes, structure and consequences of gender oppression. Consistent with the social justice track of the major, notions of fairness, justice, and equality with respect to gendered social, political and economic relations will be examined.

WGSS 347. Queer Theories of Gender and Inequality

Cross listed with: *SOCI 347*

Credits 3.00 PeopleSoft Course ID 013850

Contemporary approaches to the culture and social structure of gender and gender binaries, as they intersect with power, knowledge, science/biology and inequality. Method involves examining and challenging the cultural classification systems that inform knowledge, human action and social institutions. Requires college level reading, writing and intellectual engagement.

WGSS 348. Communication and Gender

Cross listed with: *SCOM 348*

Credits 3.00 PeopleSoft Course ID 006346 Grading Basis GRD

This course explores the role of communication in the social construction of gender across a variety of contexts. Students will critically examine the interconnectedness of sex, gender, sexuality, race and class toward understanding systems of privilege and oppression in communication practices and social institutions. Focus is on communication as a tool for personal and social change. **Prerequisite(s):** *Any 100- level SCOM course.*

WGSS 350. The Philosophy of Feminism

Cross listed with: *PHIL 350*

Credits 3.00 PeopleSoft Course ID 012189 Grading Basis GRD

An intermediate-level examination of philosophical problems in feminist theory and feminist contributions to philosophy.

WGSS 355. American Women At War

Cross listed with: *MSCI 355*

Credits 3.00 **PeopleSoft Course ID** 013429 **Grading Basis** GRD

This course invites students to engage a series of issues about the role of women in the US military. This course will examine the contributions & experiences of women who served during the American Revolution, the U.S. Civil War, WW I & II, Korea, Vietnam and the Persian Gulf War(s). Also included in this course is an examination of how women in military service both past and present are an instrument for societal change in America specifically in promoting the cause of women's rights.

WGSS 367. Sociology of Sexuality

Cross listed with: *SOCI 367*

Credits 3.00 **PeopleSoft Course ID** 011590 **Grading Basis** GRD

This course examines sociological theory and research on sexual behaviors, identities, cultures and social movements, investigating how sexuality is shaped by society and its social institutions. In addition, the course examines how sociological research on sexuality is conducted, how society shapes the sociological study of sexuality, the unique ethical concerns and methodological challenges in researching sexuality and the place of sociology in shaping discourse and social policy on relevant social issues.

WGSS 368. Women's Literature

Cross listed with: *ENG 368*

Credits 3.00 **PeopleSoft Course ID** 010156 **Grading Basis** GRD

A study of literature by women.

WGSS 369. Feminist Literary Theory

Cross listed with: *ENG 369*

Credits 3.00 **PeopleSoft Course ID** 007982 **Grading Basis** GRD

An intensive study of a variety of feminist critical approaches and their applications to literature.

WGSS 370. Queer Literature

Cross listed with: *ENG 370*

Credits 3.00 **PeopleSoft Course ID** 009807 **Grading Basis** GRD

An exploration of texts and issues in literature written by and about lesbian, gay, bisexual, transgender and queer writers, including critical and theoretical issues as well as questions of canon. Text studied may include fiction, poetry, drama, essays and memoirs written primarily, but not exclusively, in the 20th century.

WGSS 376. Anthropology of Reproduction

Cross listed with: *ANTH 376*

Credits 3.00 **PeopleSoft Course ID** 013742

This course provides students with a critical and cross-cultural perspective on human reproduction. Examining how individuals draw on social and symbolic resources to sort out complicated private decisions, we will discuss how reproductive experiences are embedded in local, national and transnational politics. Topics covered may include: cross-cultural perspectives on childbearing and childlessness, kinship, and the globalization of new reproductive technologies such as in vitro fertilization. **Prerequisite(s):** *ANTH 195 or permission of the instructor.*

WGSS 383. Women and Politics in Comparative Perspective

Cross listed with: *POSC 383*

Credits 3.00 **PeopleSoft Course ID** 011418 **Grading Basis** GRD

A study of the causes and consequences of women's political marginalization in the United States and abroad. The course examines socioeconomic and political dimensions of gender inequality, exploring how women have worked through social movements, electoral politics, and public policy initiatives to overcome obstacles to their political empowerment.

WGSS 386. Sexual Orientation, Law and Justice

Cross listed with: *JUST 386.*

Credits 3.00 **PeopleSoft Course ID** 013942 **Grading Basis** GRD

This course explores considerations of justice in shaping law and policy related to sexual orientation. The concept of sexual orientation is a relatively recent development in academic, legal, medical and other policy contexts in the United States and globally. Topics addressed in the course include the dehumanization, criminalization, medicalization and oppression of sexual orientation minorities, and legal and regulatory interventions and movements for social justice, criminal justice reform and human rights.

WGSS 400. Issues and Research in Women's, Gender and Sexuality Studies

Credits 3.00 **PeopleSoft Course ID** 000911 **Grading Basis** GRD

The capstone seminar for the Women's, Gender and Sexuality Studies minor. Focuses on readings in feminist philosophy, history and literature. Students will engage in research in critical issues affecting women's lives. **Prerequisite(s):** *WGSS 200 and nine additional credits approved by the Women's, Gender and Sexuality Studies Coordinator.*

WGSS 417. Women's Global Health and Human Rights

Cross listed with: *HTH 417, NSG 417*

Credits 3.00 **PeopleSoft Course ID** 013705 **Grading Basis** GRD

An international and human rights approach providing an overview of health issues within the context of a woman's life cycle. Attention will be given to critical issues of women's health such as access to health care and gender based violence. Such issues as sexuality, nutrition, diseases affecting women, violence, harmful traditional practices, and sex trafficking will be discussed.

WGSS 420. Feminist Rhetorics

Cross listed with: *SCOM 420, WRTC 420*

Credits 3.00 **PeopleSoft Course ID** 012001 **Grading Basis** GRD

Surveys key women figures in classical and contemporary rhetorical traditions and challenges the strategies used to historicize this tradition from feminist perspectives. Explores diverse feminist rhetorical discourses informed by race, sexual orientation, ethnicity and social class. **Prerequisite(s):** *WRTC 103 or equivalent and junior or senior standing, or permission of instructor.*

WGSS 423. Advanced Studies in Gender and Sexuality in Literature

Cross listed with: *ENG 423*

Credits 3.00 **PeopleSoft Course ID** 012949 **Grading Basis** GRD

Advanced study of a topic using a gender and sexuality studies approach to literary texts. This course will explore how gender and sexuality and their representation in literature are shaped by social, cultural, historical, and political contexts. Course may be repeated as topic changes.

WGSS 466. Advanced Studies in Women's Literature

Cross listed with: *ENG 466*

Credits 3.00 **PeopleSoft Course ID** 005817 **Grading Basis** GRD

Advanced study of women's literary achievements in several cultural and historical contexts. May be focused by theme. **Prerequisite(s):** *ENG 368/WGSS 368 or ENG 369/WGSS 369.*

WGSS 485. Gender Issues in Science

Cross listed with: *ISAT 485*

Credits 3.00 **PeopleSoft Course ID** 012465 **Grading Basis** GRD

An interdisciplinary course that looks at the scientific process, science practitioners, and science students through the lens of gender analysis. Students read literature, lead discussions, perform experiments, and analyze both data and processes to address the effects of educational systems on the preparation and careers of scientists, the influence of politics and culture on

scientific inquiry, and the effects of critiques grounded in gender analyses on understanding the scientific process.

WGSS 490. Special Studies in Women's, Gender and Sexuality Studies

Credits 3.00 PeopleSoft Course ID 003501 Grading Basis GRD

Designed to give capable students in women's, gender and sexuality studies an opportunity to complete independent study under faculty supervision.

Prerequisite(s): Admission by recommendation of the instructor and permission of the program coordinator.

WGSS 492. Internship in Women's, Gender and Sexuality Studies

Credits 1.00 - 3.00 PeopleSoft Course ID 010080 Grading Basis GRD

Provides the student with practical experience in employing and refining women's, gender and sexuality studies concepts in a public or private agency, under faculty supervision.

WGSS 495. Special Topics in Women's, Gender and Sexuality Studies

Credits 3.00 PeopleSoft Course ID 008304 Grading Basis GRD

In-depth examination of selected topics of current importance to the field of women's, gender and sexuality studies. Offered only with approval of the program coordinator and dean of the College of Arts and Letters. May be repeated for credit when course content changes. **Prerequisite(s):** WGSS 200 or consent of instructor.

Writing, Rhetoric and Technical Communication

WRTC 100. Reading and Writing Workshop

Credits 3.00 PeopleSoft Course ID 011225 Grading Basis GRD

An introduction to writing process and structure in a workshop setting. This is an elective course for students who want to select an introductory-level college writing course before taking WRTC 103.

WRTC 103. Rhetorical Reading and Writing [C1W]

Credits 3.00 PeopleSoft Course ID 011224 Grading Basis GRD

Rhetorical Reading and Writing teaches students how to write effectively in situations they have not yet encountered. By practicing reading and writing as rhetorical activities, students learn how to explore and research topics; design writing for diverse audiences, purposes and occasions; and use feedback to improve their writing. WRTC 103 fulfills the General Education Cluster One writing requirement and is a prerequisite for all WRTC courses numbered 200 or above. May be used for general education credit. May not be used for major credit.

WRTC 200. Introduction to Studies in Writing, Rhetoric and Technical Communication

Credits 3.00 PeopleSoft Course ID 012300 Grading Basis GRD

Initial core course and portal of entry into the School of Writing, Rhetoric and Technical Communication. Students will read and discuss foundational articles, undertake course projects and explore the roles that writers, rhetoricians and technical communicators are called upon to fill in their internships and jobs. **Prerequisite(s):** WRTC 103 or equivalent.

WRTC 201. Theory and Methods in Writing, Rhetoric and Technical Communication

Credits 3.00 PeopleSoft Course ID 013082 Grading Basis GRD

Introduction to the theories and methodologies employed by practitioners in writing, rhetoric and technical communication. Emphasis is placed on methods of inquiry in the discipline. Primary topics include major theoretical perspectives and theorists; the relationship of research to disciplinary knowledge; and the dynamic nature of language and communication.

Prerequisite(s): WRTC 200 or permission of the instructor. **Corequisite(s):** WRTC 200.

WRTC 300. Professional Editing

Credits 3.00 PeopleSoft Course ID 013083 Grading Basis GRD

Introduction to the conceptual and technical editing of a wide range of documents for diverse audiences and different purposes. Consideration of genre, tone, style and syntax. Students will learn to interact with authors and clients and will practice both hard copy and electronic editing. Course topics allow students to encounter a wide range of editorial experiences to prepare them for the workplace. **Corequisite(s):** WRTC 200 and WRTC 201 or permission of instructor

WRTC 301. Language, Law and Ethics

Credits 3.00 PeopleSoft Course ID 013084 Grading Basis GRD

Broad examination of the nexus of law, ethics and language. Exploration of a variety of genres in legal writing, providing a background in the role of law and ethics in society and helping students understand how language operates in the construction of legal and moral codes. Primary topics include intellectual property, privacy, legal issues in communication, the history of legal language and the ownership and ethical use of information. **Prerequisite(s):** WRTC 200 and WRTC 201 or permission of instructor

WRTC 310. Semiotics

Credits 3.00 PeopleSoft Course ID 013125 Grading Basis GRD

Systematic approach to the production of meaning and interpretation with analytical examination of semiotic signs as aggregates of information management and communication. Complexity of meaning in communication conduits, speech, texts, images, symbols, codes, icons, media designs, gestures, music and objects are investigated. Also explored is the relationship between semiotic sign systems and ecosocial systems as they impact information management and production in society. **Prerequisite(s):** WRTC 103 or equivalent.

WRTC 312. Studies in Literacy

Credits 3.00 PeopleSoft Course ID 010889 Grading Basis GRD

Advanced research and writing course designed to explore the important roles that literacy plays in society. Students will examine the concept of literacy through historical, political, sociological, educational and cross-cultural lenses. **Prerequisite(s):** WRTC 103 or equivalent.

WRTC 314. Writing in the Public Sphere

Credits 3.00 PeopleSoft Course ID 010900 Grading Basis GRD

Introduction to the concept of the public sphere and an examination of a variety of texts and media that illustrate the function of the public sphere. Students apply theoretical knowledge to the analysis of public discourse and present their analyses in oral and written formats. Students gain important insights into their own roles and responsibilities as citizens within the public sphere and learn to use language effectively in multiple rhetorical situations.

Prerequisite(s): WRTC 103 or equivalent.

WRTC 316. Research Methodologies in WRTC

Credits 3.00 PeopleSoft Course ID 013085 Grading Basis GRD

Introduction to the process of conducting research grounded in inquiry. Students use a variety of research methodologies to gather information from secondary and primary sources. Students evaluate information for accuracy and usability and interpret information for the audience and rhetorical context they have defined. Students in this course design a research study, carry it out and write a subject appropriate report. **Prerequisite(s):** WRTC 103 or equivalent.

WRTC 318. Intercultural Professional Communication

Credits 3.00 PeopleSoft Course ID 013212 Grading Basis GRD

Focus on the importance of culture to professional communication, both in print and online, by using an intercultural perspective to examine audience, purpose, persona, context, language, page and screen design, graphics and color. Includes a consideration of basic models of culture developed in professional environments, incorporating management, teamwork and translation issues, as well as how American culture differs from other cultures worldwide. **Prerequisite(s):** *WRTC 103 or equivalent.*

WRTC 326. Environmental Communication and Advocacy

Cross listed with: *SCOM 354*

Credits 3.00 PeopleSoft Course ID 011606

An exploration of the multifaceted aspects of environmental controversies including the rhetoric, advocacy campaigns and decision-making processes that produce and attempt to manage environmental conflict. Emphasis on persuasive efforts by, interest groups, corporations, resource managers, government agencies, scientific experts, politicians and citizens to influence public understanding of environmental issues, adoption of sustainable behavior and lifestyles, and public policy outcomes. **Prerequisite(s):** *WRTC 103 or equivalent.*

WRTC 328. Practicum

Credits 1.00 – 3.00 PeopleSoft Course ID 011584 Grading Basis GRD

Allows students to engage in practical experience opportunities in the field of Writing, Rhetoric, and Technical Communication. Students may apply no more than 3 practicum credit hours toward completion of WRTC major or minor requirements. **Prerequisite(s):** *WRTC 103 or equivalent.*

WRTC 330. Rhetorical Analysis and Criticism

Credits 3.00 PeopleSoft Course ID 011811 Grading Basis GRD

Survey and application of a range of rhetorical approaches to analyze print, oral, visual, and multimodal forms of everyday communicative practices. Primary topics include the origins of rhetoric, the manifestations of contemporary forms of communication, the rhetorical theories used to explain those forms, and the criticisms developed to respond to them. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor*

WRTC 332. Creative Approaches to Digital Storytelling

Credits 3.00 PeopleSoft Course ID 013086 Grading Basis GRD

This course introduces students to the history and methods of digital storytelling and provides them with the opportunity to critically evaluate a range of digital stories and to develop their own digital storytelling projects. Digital stories are narratives that are composed in digital environments using sound, audio, still images, video, and interactive elements like maps, charts and timelines. By the end of the course, students will be able to adapt digital storytelling techniques to suit a variety of genres and audiences. Throughout the course, students learn to assess digital storytelling artifacts, such as short video documentaries and mixed media narratives, and their usefulness for particular audiences and contexts. In addition to these digital composing techniques, students learn to assess and use a variety of online platforms where digital stories can be published, critique and improve their own and others' work, collaborate with others and create digital storytelling artifacts for clients. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor*

WRTC 334. Introduction to Popular Writing

Credits 3.00 PeopleSoft Course ID 012921 Grading Basis GRD

A theoretical and practical overview of the growing field of popular writing. Students will analyze a broad range of genres -- including reviews, commentaries, profiles, blogs, and ads -- from a broad range of publications, including newspapers, magazines, and the Web, with the goal of acquiring a

critical understanding of the rhetorical aims and practices of popular writing.

Prerequisite(s): *WRTC 200 and WRTC 201 or permission of instructor*

WRTC 336. Writing Consultation

Credits 3.00 PeopleSoft Course ID 011934 Grading Basis GRD

Integrates the theory and practice of writing consultation in academic and professional settings and is suited for developing tutors, teachers, consultants and editors. The course includes mentorship and practice in the University Writing Center, and it provides students opportunities to develop as writers, scholars and professionals. Upon completion of the course, students will be eligible for, but not guaranteed, employment in the University Writing Center. **Prerequisite(s):** *WRTC 103 and permission of the instructor.*

WRTC 338. Sound Writing

Credits 3.00 PeopleSoft Course ID 012269 Grading Basis GRD

This course will focus on composing about and with sound. The course combines analytical and reflective projects with practical exercises in audio recording and editing, and rhetorically discovering and using online audio sources such as music, sounds and interviews. The course may be used to explore topics such as podcasts, audio tours and professional profiles. **Prerequisite(s):** *WRTC 200 and WRTC 201; or permission of instructor.*

WRTC 340. Writing as Leading

Credits 3.00 PeopleSoft Course ID 013211 Grading Basis GRD

Investigation of contemporary leadership theories as they apply to writing; students will apply these principles and techniques to their own writing. The course will explore how writers lead readers and how leaders employ writing and use writers to influence their audiences. Students will gain experience writing in typical leadership genres, such as the position paper and the op-ed piece. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor*

WRTC 342. Writing Place

Credits 3.00 PeopleSoft Course ID 013126 Grading Basis GRD

Examines the relationship between language and location by analyzing print and virtual rhetorics of the social and natural environment. Students will learn about the rhetorical tradition of place-centered expression and the importance of place in society. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor*

WRTC 350. Foundations of Technical Communication

Credits 3.00 PeopleSoft Course ID 003843 Grading Basis GRD

Introduction to the major theories, issues, and contributors in the field of technical and scientific communication. Students explore global, print and electronic communication, ethical and legal issues, and the project cycle. They start with rhetorical analyses of audiences and progress through deliverables. Students learn to problem solve through a variety of technical communication projects and develop their career interests in chosen technical communication fields. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor.*

WRTC 351. Visual Rhetoric

Cross listed with: *SCOM 351, WRTC 351L*

Credits 3.00 PeopleSoft Course ID 011852 Grading Basis GRD

A study of the rhetorical foundations of visual and verbal arguments in academic disciplines and popular culture. Students will analyze and produce visual and verbal arguments in a variety of rhetorical contexts. **Prerequisite(s):** *WRTC 103 & 100 Level SCOM*

WRTC 351L. Visual Rhetoric

Cross listed with: *SCOM 351, WRTC 351*

Credits 3.00 PeopleSoft Course ID 011852 Grading Basis GRD

A study of the rhetorical foundations of visual and verbal arguments in academic disciplines and popular culture. Students will analyze and produce

visual and verbal arguments in a variety of rhetorical contexts. London term only. **Prerequisite(s):** *WRTC 103 and 100 level SCOM.*

WRTC 352. Online Design I

Credits 3.00 PeopleSoft Course ID 013087 Grading Basis GRD

Introduction to the most recent versions of HTML/CSS coding and industry-standard programs for creating web-friendly images, both vector and pixel based. Students will become familiar with elementary JavaScript coding and responsive web design, and explore app-based possibilities. Assignments are project-based and lead to the creation of online deliverables for various purposes. Emphasis on electronic tools and portfolio projects to prepare students for careers in digital communication. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor*

WRTC 354. Document Design

Credits 3.00 PeopleSoft Course ID 013088 Grading Basis GRD

Examination of the principles of design and the importance of the project cycle in designing documents. Students use layout and graphics programs to create professional brochures, flyers, posters, newsletters, and manuals. Students work individually and collaboratively on their projects, producing excellent portfolio pieces. This course gives students flexibility for a wide variety of career opportunities in business and industry, the non-profit sector, and government. **Prerequisite(s):** *WRTC 300 or permission of instructor*

WRTC 356. Web Theory and Design

Credits 3.00 PeopleSoft Course ID 013089 Grading Basis GRD

Introduction to Web design, emphasizing audience, purpose, structure, accessibility, content, and usability. Students analyze, create, and redesign effective websites and graphic pieces. They also learn how to create Web teams, negotiate contracts, and manage large-scale Web projects, adhering to copyright issues. They use industry accepted applications for Web and graphic design. Students in this course have the opportunity to develop several professional portfolio pieces. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor*

WRTC 358. Writing About Science and Technology

Credits 3.00 PeopleSoft Course ID 013090 Grading Basis GRD

Focus on the development and application of rhetorical strategies and tools used in writing about science and technology for a contemporary, general audience. As citizen-interpreters, students analyze and produce writing designed to make even 'hard' science and technology accessible, with particular attention to narrative, to the framing of policy issues, and to establishing relevance. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor*

WRTC 360L. British Media and Society

Cross listed with: *HUM 251L, SCOM 360L, SMAD 360L*

Credits 3.00 PeopleSoft Course ID 012295 Grading Basis GRD

Study the history, nature, and impact of mass media in the United Kingdom. Emphasis on the impact modern media has on society, and society has on media. Consideration of similarities and differences in mass media in the United States and Great Britain. Consideration of the relationship between mass media and the arts. Focus on 20th century mass media in London, one of the world's preeminent and most influential centers. London term only.

WRTC 400. Advanced Editing

Credits 3.00 PeopleSoft Course ID 013888 Grading Basis GRD

Advanced Editing initiates students into the profession of editing. Content focuses on work with longer texts and real clients to introduce advanced editing skills and considerations such as document design, universal design, project management, production and freelancing. Students will learn how to

initiate professional communication with clients, edit for users with diverse needs and work as part of an editing team. **Prerequisite(s):** *WRTC 300.*

WRTC 412. Content Strategy

Credits 3.00 PeopleSoft Course ID 006977 Grading Basis GRD

Focused study of the theory and practice of building a content strategy applicable for a variety of organizations (business, nonprofit, government). Students will learn content strategy theories, perform case study analyses and apply their findings to the design of content strategies with specific organizations in mind. **Prerequisite(s):** *WRTC 200 and WRTC 201, or permission of instructor.*

WRTC 416. Rhetoric of Environmental Science and Technology

Cross listed with: *SCOM 465*

Credits 3.00 PeopleSoft Course ID 013038 Grading Basis GRD

An advanced study of the way the public receives, makes sense of, and influences scientific and technical information about environmental issues. Implications of these processes on environmental policy will be analyzed. Readings and assignments will concentrate on the interactions between technical and public spheres of communication, with an in-depth examination of the way the media facilitates the transfer of information between scientific communities and public audiences. **Prerequisite(s):** *WRTC 103 or equivalent and junior or senior standing, or permission of instructor.*

WRTC 420. Feminist Rhetorics

Cross listed with: *SCOM 420, WGSS 420*

Credits 3.00 PeopleSoft Course ID 012001 Grading Basis GRD

Surveys key women figures in classical and contemporary rhetorical traditions and challenges the strategies used to historicize this tradition from feminist perspectives. Explores diverse feminist rhetorical discourses informed by race, sexual orientation, ethnicity and social class. **Prerequisite(s):** *WRTC 103 or equivalent and junior or senior standing, or permission of instructor.*

WRTC 426. Special Topics in Writing, Rhetoric and Technical Communication

Credits 3.00 PeopleSoft Course ID 008724 Grading Basis GRD

Focused, in-depth study of specific areas or subjects in writing, rhetoric, and technical communication. Topics may pertain to issues relevant to the discipline, to the study of particular theories and practices, or to the study of significant figures in the field. Seminars may be repeated for credit when course content changes. **Prerequisite(s):** *WRTC 103 or equivalent and junior or senior standing, or permission of instructor.*

WRTC 430. Contemporary Rhetorical Theory and Practice

Cross listed with: *SCOM 343*

Credits 3.00 PeopleSoft Course ID 012372 Grading Basis GRD

Examines contemporary rhetorical theory and practice in relation to specific social, economic and technological changes in the 20th century, with particular emphasis on theoretical frameworks. Students learn about the changing needs of postmodern communicators and how new rhetorical theories have developed to anticipate, respond to, and shape those changes. Also explored is the value of contemporary rhetorical theories for communicative and performative events. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor*

WRTC 432. Rhetoric of the Personal Narrative

Credits 3.00 PeopleSoft Course ID 011935 Grading Basis GRD

Examination of the rhetorical elements of personal narrative. Students will read examples of personal narratives ranging from essays to longer memoirs and autobiographies, in order to examine questions related to purpose, audience, voice, and style. Discussion will include what makes a piece of writing personal, what makes it a narrative, and what makes it effective. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor*

WRTC 433. Animal Rhetorics**Credits 3.00 PeopleSoft Course ID 014619 Grading Basis GRD**

Students will explore the ways various peoples have defined the human as opposed to an animal "other." What it is to be a human, a person and an animal is not static; these definitions change over time and across cultures. They are the results of ongoing acts of persuasion. What is universal, though, is the idea of a boundary between human and animal, and the ways we define either category helps define the other. Animal Rhetorics will feature readings from the history of rhetoric, biology, biosemiotics and philosophy, tracing our definitions of what it means to be a human and what it means to be rhetorical, from pre-history to the present. Assignments will include creative work, presentation and a research component. **Prerequisite(s):** *WRTC 200 and WRTC 201.*

WRTC 434. Advanced Popular Writing**Credits 3.00 PeopleSoft Course ID 013092 Grading Basis GRD**

Advanced focus on a particular genre in popular writing, such as reviews, commentaries, opinion pieces, profiles, blogs, or ads. Students will engage with a specific genre to acquire both a critical understanding of its rhetorical aims and practices as well as the skills to practice writing within that genre. Students in this course have the opportunity to develop several professional portfolio pieces. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor*

WRTC 436. Teaching Writing**Credits 3.00 PeopleSoft Course ID 010895 Grading Basis GRD**

Introduces students to the major philosophies, theories, and pedagogies of teaching writing. Special attention is devoted to such practical matters as understanding and developing effective writing assignments, methods of responding to student texts-in-progress and evaluating writing. **Prerequisite(s):** *WRTC 300 or permission of instructor.*

WRTC 447. Interaction Design**Cross listed with:** *ISAT 447***Credits 3.00 PeopleSoft Course ID 012149 Grading Basis GRD**

Study of and practice with processes, principles, tools, models and techniques for designing interactions between humans and digital products and systems. Topics include physiological and psychological factors affecting interaction design, interaction design process, interaction models, styles and paradigms, design notations and representations, prototyping, and interaction design evaluation. **Prerequisite(s):** *For WRTC majors: junior standing only.*

WRTC 450. Digital Rhetoric**Credits 3.00 PeopleSoft Course ID 006727 Grading Basis GRD**

Introduces the rhetoric of digital design in a variety of contexts. Students learn what makes for effective static and interactive digital designs and practice analyzing and creating digital designs. Student will compose technical documents within diverse traditions, which include digital rhetoric, mixed media, and visual rhetoric. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor.*

WRTC 452. Online Design II**Credits 3.00 PeopleSoft Course ID 013252 Grading Basis GRD**

Introduction to data basing and adding animation to a website. Students create interactive, professional websites that can include forms, animated buttons, searchable catalogs and splash pages. Students also have the opportunity to work with additional tools for developing creative portfolio pieces.

Prerequisite(s): *WRTC 352 or permission of instructor.***WRTC 454. Publication Management****Credits 3.00 PeopleSoft Course ID 013210 Grading Basis GRD**

Exploration of the publication production process that addresses the theory and practice of project management for professional print and electronic documents. Students work collaboratively to examine managerial and editorial responsibilities. Topics include defining editorial policy, defining management roles, working with project teams, creating document publication schedules, reviewing and editing submissions for publication and collaborating with authors. **Prerequisite(s):** *WRTC 300 or permission of instructor.*

WRTC 456. Usability Testing**Credits 3.00 PeopleSoft Course ID 013093 Grading Basis GRD**

Theoretical and practical study of the product testing of documents and interfaces in a variety of media environments. Students design, plan, and conduct tests; code data from the tests; interpret the results; and write reports. Students also research and analyze various tests as they learn about the rhetorical aims of document and interface assessment. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor.*

WRTC 458. Scientific and Medical Communication**Credits 3.00 PeopleSoft Course ID 013094 Grading Basis GRD**

Introduction to the context and use of language in scientific and medical disciplines. Emphasis is placed on understanding the rhetorical nature of scientific discourse. Primary topics include examining different forms of scientific and medical writing in traditional and digital contexts, the nature of communication within professional communities and composing texts for general readers. **Prerequisite(s):** *WRTC 200 and WRTC 201 or permission of instructor.*

WRTC 460. Legal Writing**Credits 3.00 PeopleSoft Course ID 013216 Grading Basis GRD**

Study of the central components of legal writing and the language of law with an emphasis on the genres of the legal professions. Primary focus is on legal analysis, intellectual property and fair use, and the creation of genre-relevant documents, including memoranda, briefs and legal summaries. **Prerequisite(s):** *WRTC 300 and WRTC 301, or permission of the instructor.*

WRTC 462. Government Writing**Credits 3.00 PeopleSoft Course ID 013209 Grading Basis GRD**

This course provides intensive practice in government genres or genres that occur at the intersection between governmental and political writing at the local and national levels. Democratic institutions create writing exigencies that require rhetorical intervention and technical knowledge, and this course offers writing practice in relevant genres, including news releases, consultant reports (i.e., feasibility studies), lobbyist communication and staff reports (i.e. monthly updates and annual reports). The authors of such genres include elected officials, appointed officials, citizen groups and individual citizens. Relevant issues include taxation, zoning, recycling, water treatment, sewer and wastewater treatment, environmental issues, transportation and any other timely infrastructure or policy question. **Prerequisite(s):** *WRTC 300 and WRTC 301, or permission of instructor.*

WRTC 480. Writing for Business and Industry**Credits 3.00 PeopleSoft Course ID 013127 Grading Basis GRD**

Introduction to the communication and discourse practices of the business community through a community-based learning model. Emphasis is placed on working directly with a business organization. Primary topics include language and ethics in business, the understanding of audience for business communication and the creation of business documents including proposals and business plans. **Prerequisite(s):** *WRTC 300 and WRTC 301 and WRTC 330 or WRTC 350, or permission of instructor.*

WRTC 484. Writing for Nonprofits

Credits 3.00 PeopleSoft Course ID 013095 Grading Basis GRD

Introduction to the nonprofit sector through a community-based learning model. Emphasis is placed on working directly with a nonprofit agency in the local community. Primary topics include the role of the nonprofit in society, especially as an organization for change; creation of internal and public documents, including proposals, grants and publicity materials; and the legal requirements for nonprofit status. **Prerequisite(s):** *WRTC 300 and WRTC 301 and either WRTC 330 or WRTC 350 or permission of instructor.*

WRTC 486. Writing in the Community**Credits 3.00 PeopleSoft Course ID 013096 Grading Basis GRD**

Introduction to political and social engagement at the community level using multiple texts and a community-based learning model. Emphasis is placed on writing, reflection and hands-on service projects with community agencies. Primary topics include an examination of the central role of rhetoric in citizenship, leadership, social justice and social change. **Prerequisite(s):** *WRTC 300 and WRTC 301 and either WRTC 330 or WRTC 350, or permission of instructor.*

WRTC 488. Writing in the Health Sciences**Credits 3.00 PeopleSoft Course ID 013097 Grading Basis GRD**

Introduction to the medical field through a community-based learning model. Emphasis is placed on communication within the medical field and the translation of medical language for lay audiences. Primary topics include the roles of the practitioner and audience in medical communication, power relationships among clinicians and patients, and the creation of medical documents, including reports, proposals and technical articles. **Prerequisite(s):** *WRTC 300 and WRTC 301 and either WRTC 330 or WRTC 350 or permission of instructor*

WRTC 490. Independent Study in Writing, Rhetoric and Technical Communication**Credits 3.00 PeopleSoft Course ID 009022 Grading Basis GRD**

Individualized projects in Writing, Rhetoric and Technical Communication. Available only to junior or senior majors, though exceptions may be made at the director's discretion. May be repeated with the director's approval when course content changes. **Prerequisite(s):** *WRTC 103 or equivalent and junior or senior standing, or permission of instructor.*

WRTC 495. Internship in Writing, Rhetoric and Technical Communication**Credits 3.00 PeopleSoft Course ID 007171 Grading Basis GRD**

Allows students to incorporate field experience with WRTC course work through internships in government, business, industry, or education where they can observe communication processes and apply effective written, interpersonal and public communication skills. Students must complete an application process and be approved before receiving a permission number to enroll in the course (see Internship page on WRTC website for requirements and forms). **Prerequisite(s):** *WRTC 300, WRTC 301, junior or senior standing, and permission of instructor.*

WRTC 496. Capstone in Writing, Rhetoric and Technical Communication**Credits 3.00 PeopleSoft Course ID 013098 Grading Basis GRD**

Capstone experience in which students reflect on their course work in the major with the aim of articulating how the major has broadened and deepened their understanding of the theories and practices of written communication and rhetoric as they apply to academic and professional contexts; demonstrating how WRTC student learning objectives tie together to inform their academic and professional work; and articulating short-term and long-term career goals. Students participate in seminar-style discussions, compose a personal philosophy of writing/editing/design through analysis of the work they have created in the major, and create a professional digital portfolio containing their strongest work from WRTC courses, internships and professional positions that are most representative of their career goals. **Prerequisite(s):** *WRTC 495, WRTC 200, WRTC 201, WRTC 300, WRTC 301 and senior standing, or permission of the instructor.*

WRTC 499. Honors**Credits 1.00 - 6.00 PeopleSoft Course ID 010519 Grading Basis GRD**

Offered fall and spring.

Youth Justice

YTHJ 300. Introduction to Youth Justice**Credits 3.00 PeopleSoft Course ID 014338 Grading Basis GRD**

The course introduces students to the structure and functions of the American juvenile justice system (JJS) and situates the JJS within the web of other youth-serving systems, most importantly, the child welfare system (CWS). The course also covers the characteristics of adolescents who come into contact with the JJS and CWS. A developmental perspective is used to understand the diverse pathways of juvenile delinquency, emphasizing the pivotal role that family, trauma, mental health difficulties and school play in youths' involvement in crime. This is a required course for the youth justice minor.

YTHJ 400. Transforming Youth Justice Integrative Seminar**Credits 3.00 PeopleSoft Course ID 014339 Grading Basis GRD**

This course is designed to integrate and apply knowledge from the student's major and the youth justice minor. The course emphasizes the application of knowledge through the development and implementation of a substantial, theory-based, in-depth individualized project around issues and/or challenges in the juvenile justice system with an emphasis on the population of dual status youth. Students may adapt the project to fit their career objectives and/or plans for graduate study. **Prerequisite(s):** *YTHJ 300; two additional courses approved as electives for the youth justice minor and junior or senior standing.*

YTHJ 405. Internship in Transformative Youth Justice Studies**Credits 3.00 PeopleSoft Course ID 014337 Grading Basis GRD**

This is an independent study course designed to allow students to receive academic credit for work experience in a youth justice setting related to the youth justice minor. Students enrolled in YTHJ 405 will arrange their work schedule with their internship provider and will consult with the faculty member of record for the course to obtain approval for their final research paper topic. Course may be taken twice. **Prerequisite(s):** *YTHJ 300; two additional courses in the YTHJ minor; and approval of the youth justice minor coordinator.*

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Police Department
James Madison University
821 South Main Street
MSC 6810
Harrisonburg, VA 22807

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