



19



JAMES MADISON UNIVERSITY

GRADUATE CATALOG

20



Table Contents

University Calendar.....	1
About the University	2
Mission Statement.....	2
History.....	2
Administration	2
James Madison University Administration.....	2
Office of Alumni Relations	3
JMU Foundation.....	3
Accreditation	3
About The Graduate School	5
Overview	5
Mission.....	5
History of Graduate Education	5
Authorization	5
Degrees Offered.....	6
Outreach and Engagement.....	7
Admission of Veterans	7
Certificate Program Admission	7
Non-degree Seeking Student Admission.....	7
Non-credit Courses.....	7
Admission to Graduate Programs	8
Acceptable Regional Accrediting Agencies for Colleges and Universities.....	8
General Application Procedures	8
International Student Applications	9
Offer of Admission to The Graduate School.....	10
Time Limitations.....	10
University Residences	11
Admission of Veterans	11
Foreign Language.....	11
Tuition, Fees and Expenses	12
Billing and Registration	12
Continuous Enrollment.....	12
Tuition and Fees.....	12
Delinquent Accounts	12
Eligibility for In-state Tuition.....	13
Online Courses	13
Room and Board	13
Refunds.....	13
Withdrawal Refunds.....	13
Financial Declaration for International Graduate Students.....	14
Financial Assistance 15	
Scholarships, Grants, Student Employment and Loans	15
Assistantships	15
Federal Financial Assistance Programs	16
JMU Scholarships.....	17
Private Scholarships.....	17
Ronald E. McNair Post-Baccalaureate Achievement Program.....	17
Employment	17
University Withdrawal.....	18
Student Services and Learning Resources 19	
Center for Assessment and Research Studies (CARS)	20
Center for Faculty Innovation	20
Center for Global Engagement	21
Center for Multicultural Student Services	21
Cohen Center for the Humanities	22
Community Service-Learning.....	22
Counseling Center	22
Graduate Student Association.....	22
Information Technology.....	22
JMU Libraries & Educational Technologies.....	23

Learning Centers.....	23
Non-Discrimination Statement.....	24
Off-Campus Life.....	24
Office of Disability Services and Learning Strategies.....	24
Office of Equal Opportunity.....	25
Office of Student Accountability and Restorative Practices.....	25
Office of the Dean of Students.....	25
Office of the Registrar.....	25
Public Safety.....	25
Residence Life.....	25
Student Handbook.....	25
Student Success Center.....	26
Title IX.....	26
University Health Center.....	26
University Recreation.....	26
University Unions.....	27
Withdrawal from the University.....	27
Your Right to Know.....	27
General Regulations	28
Academic Standing and Continued Enrollment.....	28
Advising.....	29
Catalog of Record.....	29
Changes to Policies and Programs of The Graduate School.....	29
Comprehensive Assessment Procedure.....	29
Confidentiality of Educational Records.....	30
Course Levels.....	30
Dissertation, Thesis and Ed.S. Research Project.....	30
Doctoral Candidacy Request.....	31
General Review Process.....	31
Grade Review Procedures.....	31
Grading System.....	32
Graduation.....	33
Grievance Procedure for Students.....	33
Harassment.....	34
Honor System.....	34
Inclement Weather or Emergency.....	34
Military Service.....	34
Misconduct in Research and Other Scholarly Work.....	36
Transfer Credit.....	36
Withdrawal.....	37
Your Right To Know.....	37
Doctoral Programs.....	37
Assessment and Measurement, Ph.D.....	37
Audiology, Au.D.....	39
Combined-Integrated (C-I) Clinical and School Psychology, Psy.D.....	40
Communication Sciences and Disorders, Ph.D.....	41
Counseling and Supervision, Ph.D.....	42
Musical Arts, Doctor of Musical Arts, D.M.A.....	43
Nursing, Doctor of Nursing Practice, D.N.P.....	46
Strategic Leadership, Doctor of Philosophy, Ph.D.....	47
Master's Programs.....	49
Accounting, M.S.....	49
Art, Design and Art History.....	50
<i>Art Education, M.A.</i>	50
<i>Art, Art History, M.A.</i>	51
<i>Art, Studio Art, M.F.A.</i>	51
Athletic Training, Master of Science in Athletic Training, M.S.A.T.....	53
Biology, Master of Science, M.S.....	54
Master of Business Administration, M.B.A.....	55
<i>Executive Leadership M.B.A. Concentration</i>	55
<i>Information Security M.B.A. Concentration</i>	56
<i>Innovation M.B.A. Concentration</i>	56
Communication and Advocacy, M.A.....	57
Communications Sciences and Disorders.....	60

M.S. in Communication Sciences and Disorders (Research)	60
Computer Science, M.S.	62
Counseling, M.A./Ed.S.	64
Clinical Mental Health Counseling Program	64
Counseling, M.Ed., College Student Personnel Administration	65
Counseling, M.Ed., School Counseling	66
Education, Early Childhood Education (PreK-3), M.A.T.	67
Education, M.A.T., Elementary Education (PreK-6)	68
Education, M.Ed., Literacy Education Concentration	68
Education, M.S.Ed., Adult Education/Human Resource Development	70
Special Education - Fifth Year, Adapted Curriculum K-12, M.A.T.	72
Special Education - Fifth Year, Inclusive Early Childhood Education, M.A.T.	73
<i>Special Education, Adaptive Behavior, M.A.T.</i>	74
<i>Special Education, Behavior Specialist, M.Ed.</i>	74
Special Education, Early Childhood Special Education, M.A.T.	74
Special Education, General Curriculum K-12, M.A.T.	75
Special Education, M.A.T.	75
Post-Baccalaureate M.A.T. Program: Initial Licensure Program	75
Special Education, M.Ed.	76
Special Education, Visual Impairments, M.A.T.	76
<i>Education, Equity and Cultural Diversity Concentration, M.Ed.</i>	76
<i>Spanish Language and Culture for Educators, M.Ed.</i>	77
Education, Teaching English to Speakers of Other Languages (TESOL), M.A.T.	78
Education, M.Ed., Concentration in K-8 Mathematics Specialization	79
Education, Educational Leadership, M.Ed.	79
<i>Education, M.Ed., Educational Technology Concentration</i>	81
<i>Education, M.Ed., Equity and Cultural Diversity Concentration</i>	81
Education, M.A.T., Inclusive Early Childhood Education (Birth - Grade 3)	82
Education, M.Ed., Middle School Education (Grades 4-8) Concentration	82
Education, M.A.T., Middle School Education (Grades 6-8) Concentration	83
Education, M.A.T., Secondary Education (Grades 6-12) Concentration	84
Education, M.Ed., Secondary Education (Grades 6-12) Concentration	85
Education, M.A.T., Teaching English to Speakers of Other Languages (TESOL)	85
English, M.A.	87
Health Sciences, M.S.	89
<i>Dietetics Concentration</i>	89
<i>Nutrition and Physical Activity Concentration</i>	89
History, M.A.	90
Integrated Science and Technology, M.S.	91
Kinesiology.	93
Mathematics, M.Ed.	95
Music, Master's of Music, M.M.	96
<i>Music, Composition, M.M.</i>	97
<i>Music, Music Education, M.M.</i>	97
<i>Music, Performance, M.M.</i>	98
<i>Music, Performance, Optional Singing Health Emphasis, M.M.</i>	98
Nursing, Master of Science in Nursing, M.S.N.	99
<i>Nursing, Adult/Gerontology Primary Care Nurse Practitioner (AGPCNP), M.S.N.</i>	99
<i>Nursing, Clinical Nurse Leader (CNL), M.S.N.</i>	100
<i>Nursing, Clinical Nurse Leader (CNL) Curriculum</i>	101
<i>Nursing, Family Nurse Practitioner (FNP), M.S.N.</i>	101
<i>Nursing, Family Nurse Practitioner (FNP) Curriculum</i>	101
<i>Nursing, Nurse Administrator (NA), M.S.N.</i>	101
<i>Nursing, Nurse Midwifery, M.S.N.</i>	101
<i>Nursing, Psychiatric Mental Health Nurse Practitioner (PMHNP), M.S.N.</i>	102
Occupational Therapy, M.O.T.	103
Physician Assistant Studies, M.P.A.S.	107
Political Science, European Union Policy Studies Concentration, M.A.	109
Psychological Sciences, M.A.	110
<i>Psychological Sciences, Applied Research Concentration</i>	110
<i>Psychological Sciences, Behavior Analysis Concentration</i>	111
<i>Psychological Sciences, Experimental Psychology Concentration, M.A.</i>	112
<i>Psychological Sciences, Quantitative Psychology Concentration</i>	113
Public Administration, M.P.A.	115
School Psychology, M.A./Ed.S.	118

Speech-Language Pathology (Clinical), M.S.	119
Sport and Recreation Leadership, M.S.	120
<i>Campus Recreation Concentration</i>	120
<i>Sport and Recreation Concentration</i>	120
Writing, Rhetoric, and Technical Communication.....	121
Certificate Programs	123
Autism Spectrum Disorders Certificate.....	123
College Student Personnel Administration Certificate.....	123
Computer Science Certificates	123
Certificate in Network/Information Security.....	123
Certificate in Secure Computer and Database Systems	123
Cyber Intelligence Graduate Certificate.....	123
Educational Leadership Certificate.....	124
Educational Technology Leadership Certificate.....	124
Gifted Education Program.....	124
Higher Education Assessment Specialist Graduate Certificate	124
Public Administration, Management in International Nongovernmental Organizations Certificate	124
Course Descriptions	125
Graduate Faculty	188

Fall Semester 2019

August 20-21, Tuesday-Wednesday

Residence halls open for freshmen on assigned days.
Dining Services open on Tuesday, August 20th and fall meal plans begin at 5 p.m. for freshmen.

August 23, Friday

Opening Faculty Meeting
Freshman Assessment Day

August 26, Monday

Classes meet as scheduled.

September 13, Friday

Last day to withdraw from the university with cancellation of tuition charges and refund.

October 11-13, Friday-Sunday

Family Weekend

October 11, Friday

First Block courses end.

October 14, Monday

Second Block courses begin.

October 15, Tuesday

Last day to submit an application for a baccalaureate degree if graduation requirements are to be met in May or August 2020.

October 17, Thursday

Mid-semester grades due in the Office of the Registrar.

October 22, Tuesday

First Block course grades due in the Office of the Registrar.

October 25-27, Friday-Sunday

Homecoming

November 4, Monday

Registration begins for 2020 spring semester.

November 22, Friday

Dining Services closes at 7:30 p.m.

November 23, Saturday

Thanksgiving holiday begins and residence halls close.

November 30, Saturday

Residence halls open. Dining Services open at 4:30 p.m.

December 2, Monday

Classes resume.

December 2, Monday

Last day for students to submit work to faculty for 2019 spring semester and 2019 summer session for removal of "incomplete" grades.

December 6, Friday

Last day of classes.

Last day for faculty to turn in removal of "incomplete" grades for 2019 spring semester and 2019 summer session to the Office of the Registrar.

December 7-13, Saturday-Friday

Final Examinations.

December 13, Friday

Dining Services close and fall meal plans end at 2 p.m.

Deadline for completion of course work for December graduates.

December 14, Saturday

Undergraduate Commencement Ceremony

Residence halls close.

December 16, Monday

Regular semester and Second Block course grades due in the Office of the Registrar by 3 p.m.

Winter Session 2020

January 6, Monday

Classes meet as scheduled.

January 10, Friday

Final examinations.

January 13, Monday

Winter Session Grades Due.

Spring Semester 2020

January 12, Sunday

Residence halls open.

Spring meal plans begin and Dining Services open at 5 p.m.

January 13, Monday

Classes meet as scheduled.

January 20, Monday

Martin Luther King, Jr. Holiday. Classes do not meet.

January 31, Friday

Last day to withdraw from the university with cancellation of tuition charges and refund.

February 11, Tuesday

Student Assessment/Faculty Assistance (No classes 8 a.m.- 4 p.m.)

Evening classes (those beginning 4 p.m. or later) meet as scheduled.

March 3, Tuesday

First Block courses end.

March 6, Friday

Mid-semester grades due in the Office of the Registrar.

Dining Services close at 2 p.m. Residence halls close.

March 9-13, Monday-Friday

Spring Break. Classes do not meet.

March 15, Sunday

Residence halls open. Dining Services open at 5 p.m.

March 16, Monday

Classes resume.

Second Block courses begin.

March 17, Tuesday

First Block course grades due in the Office of the Registrar.

March 20, Friday

James Madison Day.

March 23, Monday

Advance registration for 2020 summer session begins.

April 6, Monday

Registration begins for 2020 fall semester.

April 15, Wednesday

Last day to submit a graduation application if graduation requirements are to be met in December 2020.

April 16, Thursday

Last day for students to submit work to faculty for 2019 fall semester for removal of "incomplete" grades.

April 30, Thursday

Last day of classes.

Last day for faculty to turn in removal of "incomplete" grades for 2019 fall semester to the Office of the Registrar.

May 1-7, Friday-Thursday

Final Examinations. University housing checkout process.

May 7, Thursday

Residence halls close for undergraduate students.

Spring meal plans end and Dining Services close at 7 p.m.

Deadline for completion of course work for May graduates.

May 7-9, Thursday-Saturday

Commencement Ceremonies

May 12, Tuesday

Regular Semester and Second Block course grades due in the Office of the Registrar by 3 p.m.

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 The Madison Collaborative: Ethical Reasoning in Action with the purpose of teaching ethical reasoning skills to every student at the university.

First year students are introduced to the Madison Collaborative 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. The Madison Collaborative 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 2014 enrollment of 20,855 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 to its first student body 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 in 1966. Dr. Ronald E. Carrier became JMU's fourth president in 1971. His administration changed Madison College into a university. In 1977, the university 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. Before being named president, Rose had served as a member of the institution's administration for 23 years.

Jonathan Alger took office in July 2012 as the sixth president of James Madison University. Under his leadership, JMU has developed a new vision to be "the national model of the engaged university: engaged with ideas and the world," along with a new strategic plan focused on engaged learning, community engagement and civic engagement. President Alger is a nationally recognized expert in higher education law and policy and held previous positions at Rutgers University, the University of Michigan, the American Association of University Professors and the U.S. Department of Education.

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 senior vice president for administration and finance, the vice president for student affairs, the vice president for access and enrollment management, the vice president for university advancement, the executive director for campus and community programs for access and inclusion, university counsel, the special assistant to the president for strategic planning and engagement, and the executive advisor to the president.

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

Ms. Maribeth D. Herod, (Rector), Herndon, VA
Mr. Michael B. Battle, Clarksville, MD
Ms. Vanessa M. Evans-Grevious Charlottesville, VA
Mr. Frank T. Gadams, Norfolk, VA
Mr. Jeffrey E. Grass, Arlington, VA
Mr. Matthew A. Gray-Keeling, Richmond, VA
Ms. Lucy Hutchinson, New York, NY
Ms. Maria D. Jankowski, Richmond, VA
Ms. Deborah T. Johnson, Woodbridge, VA

Ms. Lara P. Major (Vice Rector), Purcellville, VA
Ms. Maggie A. Ragon, Staunton, VA
Mr. John C. Rothenberger, Great Falls, VA
Mr. Michael M. Thomas, Reston, VA
Ms. Kathy J. Warden, Great Falls, VA
Mr. Craig B. Welburn, Manassas, VA
Mr. Norman R. Jones III (student representative), Manassas, VA
Ms. Donna L. Harper (Secretary), JMU/Harrisonburg, VA

Chief Administrative Officers

President

Jonathan R. Alger, J.D.

Senior Leadership Team

Heather J. Coltman, D.M.A.

Provost and Senior Vice President for Academic Affairs

Michael K. Davis, Ph.D.

Executive Advisor to the President

Art T. Dean II, M.Ed.

Executive Director for Campus and Community Programs for Access and Inclusion

Donna L. Harper, Ed.S.

Vice President for Access and Enrollment Management

Charles W. King Jr., M.A.

Senior Vice President for Administration and Finance

Nick L. Langridge, Ph.D.

Vice President for University Advancement

Timothy M. Miller, Ed.D.

Vice President for Student Affairs

Deans

Robert D. Aguirre, Ph.D.

Dean, College of Arts and Letters

Cynthia M. Bauerle, Ph.D.

Dean, College of Science and Mathematics

Michael E. Busing, Ph.D.

Dean, College of Business

John Burgess, M.A.

Interim Dean, The Graduate School

Robert A. Kolvoord, Ph.D.

Dean, College of Integrated Science and Engineering

Organization

JMU consists of the following colleges and academic administrative units:

- 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

Jack Knight, J.D.

University Counsel/Assistant Attorney General and Special Counsel

Sharon E. Lovell, Ph.D.

Dean, College of Health and Behavioral Studies

Bradley R. Newcomer, Ph.D.

Dean, Honors College

Rubén Graciani, M.F.A.

Acting Dean, College of Visual and Performing Arts

Mark L'Esperance, Ph.D.

Dean, College of Education

Melissa Lubin, Ph.D.

Dean, Professional and Continuing Education

- College of Visual and Performing Arts
- Libraries and Educational Technologies
- Honors College
- The Graduate School
- Professional and Continuing Education
- University Studies

Office of Alumni Relations

Phone: (540) 568-6234

Website: <http://alumni.jmu.edu/>

JMU benefits from an active, enthusiastic and supportive alumni association. With more than 135,000 graduates, the JMU Alumni Association strives to develop a continuing interest in the university by providing opportunities for service, fellowship, networking and loyalty for JMU alumni. The association provides scholarship opportunities for incoming JMU students. Alumni chapters across the globe sponsor socials, programs, scholarships, community service and various events to engage alumni in their area. The alumni association also hosts annual programming on campus, including homecoming, reunions and an annual alumni volunteer conference.

The JMU Alumni Association is directed by a board of directors who represent the interests of all graduates by reviewing and setting the strategy for the association. JMU's magazine, *Madison*, provides information about the university to all alumni, parents of currently enrolled students, friends and businesses, corporations, and foundations associated with JMU. The e-newsletter, *Madison Update*, is a popular way for alumni to stay informed about alumni and campus activities.

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. Its vision is to provide an ever-growing and sustainable source of private support for the university community by promoting a culture of philanthropy, prudent investment, stewardship and excellence. The foundation is guided by an abiding commitment to the university, valuing generosity and fiscal responsibility.

Accreditation

James Madison University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award baccalaureate, masters and doctorate degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call (404) 679-4500 for questions about the accreditation of James Madison University. The Commission should only be contacted concerning an institution's significant non-compliance with a requirement or standard. Normal inquiries about James Madison University (such as admission requirements, financial aid, education programs, etc.) should be directed to JMU, not the Commission's office.

Additional Accreditation

ABET, Incorporated

AACSB International – The Association to Advance Collegiate Schools of Business

American Chemical Society

Accreditation Council for Occupational Therapy Education

American Psychological Association

Association for Information Technology Professionals

Association of University Health Programs in Health Administration

Accreditation Review Commission on Education for Physician Assistants, Inc.

Commission for Collegiate Nursing Education

Commission on Accreditation for Dietetics Education, the accrediting agency for The American Dietetic Association

Commission on Accreditation of Athletic Training Education

Council for Interior Design Accreditation

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 Educator Preparation

Council on Social Work Education (baccalaureate level)

Education Commission on Accreditation on Social Work

Educational Standards Board of the American Speech-Language-Hearing Association

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

Review Commission on Education for the Physician Assistant

Society for Public Health Education

Virginia Board of Nursing

Memberships

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

About The Graduate School

Interim Dean: John Burgess
Madison Hall, Room 4050
<http://www.jmu.edu/grad>

Associate Dean: Michael Stolloff
100 E. Grace Street
Phone: (540) 568-6131
Harrisonburg, VA 22807
MSC 6702

Overview

The Graduate School coordinates graduate and post-graduate education throughout the university. There have been over 17,000 graduate degrees awarded through 2016, and enrollment growth and ongoing development of nationally and internationally recognized graduate programs are key strategic initiatives of the university.

Mission

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.

History of Graduate Education

Founded in 1908 and located in the center of Virginia's Shenandoah Valley, James Madison University is a public comprehensive university. The university offers degree programs at the bachelor's, master's, educational specialist and doctoral levels. The total enrollment exceeds 20,000 with over 1,800 graduate students. JMU annually receives more than 2,600 graduate applications.

The campus consists of more than 720 acres and features nearly 150 major buildings. In the more than 100 years since its founding, JMU has grown from a state normal and industrial school for women to today's comprehensive university. In 1938 the institution was named Madison College in honor of the fourth president of the United States and in 1977, the name was changed to James Madison 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.

Currently, seven academic colleges offer nearly 60 graduate programs. For the last two decades, U.S. News and World Report has ranked JMU either first or second among the top public master's-level schools in the south; eleven graduate programs are nationally ranked. JMU is continually cited in Kiplinger's top 100 "Best Values in Public Colleges."

Authorization

James Madison University 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.

The Graduate School offers the following programs and degrees:

- Accounting (M.S.)
- Adult Education/Human Resource Development (M.S.Ed.)
- Art Education (M.A.)
- Assessment and Measurement (Ph.D.)
- Biology (M.S.)
- Business Administration (M.B.A.)
- Business Administration – (Northern Virginia) (M.B.A.)
- Clinical Mental Health Counseling (M.A./Ed.S.)
- College Student Personnel Administration (M.Ed.)
- Combined – Integrated Clinical and School Psychology (Psy.D.)
- Communication and Advocacy (M.A.)
- Communication Sciences and Disorders (Clinical Audiology) (Au.D.)
- Communication Sciences and Disorders (M.S.; Ph.D.)
- Computer Science (M.S.)
- Counseling and Supervision (Ph.D.)
- Education – Fifth year format (M.A.T.)
- Education (M.A.T.; M.Ed.)
- Education, Special – Fifth year format (M.A.T.)
- Education, Special (M.A.T.; M.Ed.)
- English (M.A.)
- Health Sciences (M.S.)
- History (M.A.)
- Kinesiology – Fifth year format (M.A.T.)
- Kinesiology (M.S.)
- Mathematics (M.Ed.)
- Music (M.M.)
- Nursing (M.S.N.; D.N.P.)
- Occupational Therapy (M.O.T.)
- Performance/Conducting, Pedagogy, Literature (D.M.A.)
- Physician Assistant Studies (M.P.A.S.)
- Political Science – European Union Policy Studies (M.A.)
- Psychological Sciences (M.A.)
- Public Administration – Fifth year format (M.P.A.)
- Public Administration (M.P.A.)
- School Counseling (M.Ed.)
- School Psychology (M.A.; Ed.S.)
- Speech Pathology (Clinical) (M.S.)
- Speech Pathology (Online) (M.S.)
- Sport and Recreation Leadership (M.S.)
- Strategic Leadership (Ph.D.)
- Studio Art (M.A.; M.F.A.)
- Writing, Rhetoric and Technical Communication (M.A.)

Phone: (540) 568-4253

Email: outreach@jmu.edu

Fax: (540) 568-4252

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

Outreach & Engagement is part of University Programs. Outreach & Engagement offers credit and non-credit programs as well as targeted one-time courses, certificate programs and complete degree programs at a distance. The mission of Outreach & Engagement is to provide access to anyone seeking opportunities for educational or personal growth. Outreach & Engagement works with faculty, academic units, students and community organizations to design, market and deliver a wide array of courses. Outreach & Engagement also oversees the enrollment of non-degree seeking students. Non-degree seeking students are individuals who enroll in offered credit courses but do not seek a degree.

Admission of Veterans

Outreach & Engagement encourages veterans to apply for admission as full- or part-time students. For information, contact:

Veterans Coordinator

James Madison University
Office of the Registrar, MSC 3528
Harrisonburg, VA 22807

(540) 568-6569
<http://www.jmu.edu/registrar>

JMU does not determine eligibility for federal veterans' education benefits. Apply through the U.S. Department of Veterans Affairs (VA). The U.S. Department of Veterans Affairs website will guide students through the process, and the VA will notify JMU of veterans' eligibility. The Registrar's Office processes the claims and other paperwork required so students receive payments on time.

Certificate Program Admission

Individuals who wish to pursue any of the graduate certificate programs through JMU should apply through Outreach & Engagement and be approved before registering for classes. Individuals must complete the Certificate Program Application and select the program to which they are applying. Virginia residents must also complete the "Application for Virginia In-State Tuition Rates." A non-refundable \$45 processing fee must accompany the application. Although certificate program students are considered nondegree seeking students, applicants for certificate programs need only complete the Certificate Program Application once for the semester in which they wish to begin the program. Applications for certificate programs are forwarded to the appropriate academic unit for review, and applicants should check with the academic unit for additional application materials that may be required. A list of available certificate programs can be found at <http://www.jmu.edu/outreach/programs/certificates.shtml>.

Non-degree Seeking Student Admission

The non-degree seeking student classification includes adult non-degree students and teacher licensure students. An individual seeking enrollment as a non-degree seeking student must complete the "Non-degree Seeking Student Application." Virginia residents must also complete the "Application for Virginia In-state Tuition Rates." A non-refundable \$20 processing fee must accompany the application. Non-degree seeking students must submit the application and processing fee each semester they enroll in a course. At the 500 level and above, courses require approval by the appropriate academic unit head. Non-degree seeking students can complete the Non-Degree Seeking Student Application and the in-state form by going to <http://www.jmu.edu/outreach> and clicking "Apply." Students should register online during the dates identified for non-degree seeking students following the instructions at <http://www.jmu.edu/registrar> and clicking "For Students" then "Registration Information Dates and Deadlines." Walk-in registration and course adjustments are also permitted for non-degree seeking students. Non-degree seeking students can enroll for up to 11 credit hours per semester.

The courses taken in the non-degree seeking student category carry university credit, and they may be transferred into a graduate program, once admitted, at the discretion of the program. Taking courses as a non-degree seeking student does not constitute admission to a program or imply later applicability of these courses toward a degree. An individual who has been academically dismissed from JMU or another institution shall be required to wait for at least one calendar year for admission as a non-degree seeking student.

Non-credit Courses

JMU coordinates all non-credit instructional programs through Outreach & Engagement. These programs are available for supplementing and updating knowledge, skills and abilities. Some non-credit courses and workshops award continuing education units (CEUs) as a uniform measure of professional development and to signify the student has completed the course or workshop. Information on CEUs is available online at <http://www.jmu.edu/outreach/programs/all/ceu/index.shtml>. Information on non-credit course offerings and registration is available at <http://www.jmu.edu/outreach>. Additional information about Outreach & Engagement as well as other registration information can be accessed on the Outreach & Engagement website.

Admission to Graduate Programs

Mailing Address:	Physical Address:	
The Graduate School	Madison Hall, Room 4050	
James Madison University	100 E. Grace Street	E-mail: grad@jmu.edu
MSC 6702	Harrisonburg, VA 22807	Phone: 540-568-6131
Harrisonburg, VA 22807		Fax: 540-568-7860

All applicants to individual graduate programs at JMU must first satisfy the general application requirements of The Graduate School. These are:

- Graduation from a regionally accredited college or university (see accrediting agencies below).
- Satisfactory grade point average.
- Consult information regarding individual graduate programs for specific entry test requirements (<http://www.jmu.edu/grad/programs/all-programs/index-requirements.shtml>).
- Official transcripts from all colleges and universities attended.

Students may not substitute experiential learning for required academic credit.

An application is not considered complete until all required credentials and supporting documents have been received by The Graduate School. Prospective students must submit their application and upload transcripts for each institution listed and any supplemental materials required by the program.

In accordance with the Southern Association of Colleges and Schools Commission on Colleges guidelines, graduate programs must have both qualitative and quantitative requirements that result in the admission of students whose educational preparation indicates the potential for a high level of performance. Admission procedures include the requirement that an applicant submit, as part of the formal application process, evaluations by professionals in the field as to the readiness of an applicant for graduate work and, if appropriate, credential evaluations. Standardized test admission criteria for each graduate program are established by the faculty responsible for instruction in that program. Contact the program directly or see The Graduate School website for specific requirements.

Acceptable Regional Accrediting Agencies for Colleges and Universities

- | | |
|--|--|
| <ul style="list-style-type: none">• Middle State Association of Colleges and Schools• North Central Association of Colleges and Schools• New England Association of Colleges and Schools | <ul style="list-style-type: none">• Northwest Association of Colleges and Schools• Southern Association of Colleges and Schools• Western Association of Colleges and Schools |
|--|--|

General Application Procedures

Prospective students must submit their application online through The Graduate School website. For details, refer to <http://www.jmu.edu/grad/prospective>. Upon successful submission of an application, the applicant will receive an electronic response confirming receipt of the online application, as well as instructions on how to track the status of their application. Once the application has been reviewed by the program to which the prospective student has applied, the program will submit a recommendation to The Graduate School. Applicants will be able to view their admission decision within their Activity Page. Students who need a paper format due to a disability should contact the Office of Disability Services to determine their eligibility for accommodations in the application process.

JMU does not allow students to apply to more than one graduate program per application form. Information regarding financial aid may be accessed online at <http://www.jmu.edu/finaid>. Class schedules are available online at <http://www.jmu.edu/registrar>.

Submission of Materials for Application

The following information must be submitted online:

- Official graduate application
- \$60 nonrefundable fee
- Transcripts of all prior undergraduate and graduate course work and degree confirmations should be submitted with the electronic application in the space provided, which will be used by the department for consideration for admission. Accurate but unofficial transcripts are acceptable for review purposes. Do not have official transcripts sent to The Graduate School unless notified to do so by The Graduate School.
- The official standardized tests scores (GRE, GMAT, etc.) sent directly from the testing center (if applicable —see www.jmu.edu/grad/programs/all-programs/index-requirements.shtml for requirements). The JMU graduate institution code is 5392 (1043 for CSDCAS applicants; 7442 for Physician Assistant applicants).
- Letters of Recommendation (if applicable)
- Program specific requirements (if applicable)

Graduate applications will not be processed without application fees. Payment must be made online using Visa, MasterCard, American Express or Discover. The application fee may also be paid by electronic check, but it may take seven to ten business days to clear, which will delay the review of application.

Application Fees and Fee Waivers

All applicants to James Madison University are required to pay a non-refundable application fee to be considered for admission.

Eligibility Requirements for Admissions Application Fee Waivers

Certain applicants may qualify for an application fee waiver. Email grad@jmu.edu for the Request for Graduate Application Fee Waiver form or go to our website at <http://www.jmu.edu/grad/prospective/application-fee-waivers.shtml>. Additional documentation is required as shown below.

Fee Waiver Types

McNair Scholars

McNair Scholars are eligible for a fee waiver. Email grad@jmu.edu to request the Certification of McNair Program Participation Form and let us know you are a McNair Scholar seeking a fee waiver. You will receive instructions by email.

Senior Citizens Higher Education Act of 1974

Eligible Virginia residents who have been a legal resident of the State of Virginia for one year prior to the term for which enrollment is sought, 60 years or older with a taxable income of less than \$23,850 may qualify for an application waiver. Email grad@jmu.edu and request the Senior Citizen Higher Education Act Waiver Form.

Veterans

Honorably discharged members of the U.S. armed forces: Please submit a completed Request for Graduate Application Fee Waiver form and submit a copy of your Leave Earning Statement (LES) or DD214.

Need-Based

JMU applicants seeking a need-based application fee waiver should provide a GRE Fee Reduction Certificate. Non-JMU applicants seeking a need-based fee waiver should provide a FAFSA sent from a representative at the institution where the applicant is currently enrolled as a student, which indicates an expected family contribution (EFC) of \$0 toward tuition for the current academic year.

When applying online and claiming one of these application fee waivers, your application will not be processed unless the Request for Graduate Application Fee Waiver Form is completed and submitted with all required documentation prior to the application deadline.

Submission of Materials for After Admission

The following information must be sent to The Graduate School once the student is accepted:

- Official transcripts sent directly from all previously attended institutions of all prior undergraduate and graduate coursework and degree confirmations. Official transcripts may be mailed or sent electronically through the eSCRIP-SAFE® global electronic transcript delivery network. For graduates of James Madison University after 1996, only transcripts for post-baccalaureate course work taken elsewhere need to be sent.

Application Deadlines

Refer to specific academic programs for details.

International Student Applications

Website: <http://www.jmu.edu/grad/prospective/international/index.shtml>

JMU encourages applications for graduate study from qualified international students. However applicants should be aware that student visas cannot be issued for programs that are exclusively online. Applicants should check with their program's requirements page before submitting an application.

To assure that the university qualifies with the U.S. government as an educational institution serving international students, certain criteria must be met. Because academic programs vary among countries, student who complete degree programs outside of the United States must document all courses completed to earn their degree. Applicants are permitted to submit unofficial documentation of their prior course work during the initial admission review. However, applicants should consider that your admission review is based on the materials that you provide to us, and you are more likely to be admitted when you provide us information that allows us to be confident about your prior experiences. So please consider:

The best information you can send us is a course-by-course credential evaluation from a NACES member agency.

If the curriculum for your degree is similar to programs offered in the United States, then a copy of university document that shows the courses you have taken and your grades will be acceptable if this document is in English.

If your course-by-course record is not in English, we will accept an unofficial English translation. Please send a copy of your course record in the official university language and also an English language translation. List the courses you have taken and the grades you have earned. Keep in mind that while we will accept this form of documentation, this may not be considered strong evidence of prior academic work by some program admission committees. Admission committees have the right to not accept a candidate because they do not have sufficient evidence of preparation for graduate school which includes their prior course history.

As described above, transcripts from universities in the United States and official course-by-course credential evaluations for universities outside of the United States are considered the best documentation of prior academic work. We advise applicants to submit the best documentation available, given their circumstances.

Admitted students who are accepted based on unofficial documentation, and students who completed credential evaluations prior to the completion of their degree, will be required to submit official documentation by the end of their first semester of enrollment.

Initial inquiries for international admissions must be directed to The Graduate School. Applicants residing outside the United States are encouraged to allow 12 months between application for admission and the requested enrollment semester.

In addition to the general application requirements of The Graduate School, international applicants applying for admission to a graduate program must:

- Have the necessary ability and educational background to benefit from experiences in this institution.
Graduate programs at JMU invite high levels of student engagement through class discussions, collaborative projects and interpersonal contact with professors and peers. The ability to communicate proficiently in the English language is vital to a student's participation and success in the graduate program. Graduate applicants who are non-native speakers of English must demonstrate English language proficiency. Candidates usually demonstrate English proficiency with any of the following options:
- Provide a transcript of an earned bachelor's or higher degree from an accredited college or university in the U.S. or an accredited college or university outside the U.S. at which English is recognized as the primary language of instruction.
- Submit satisfactory English language proficiency test scores. These scores are typically acceptable:
 - Test of English as a Foreign Language (TOEFL) iBT total score of 80 or above
 - International English Language Testing System (IELTS) overall band score of 6.5 or above
 - Note that the scores on each of the subtests (reading, writing, speaking, and listening) must be satisfactory.
- Successfully complete English language preparation programs for graduate school offered by:
 - Study Group
 - Eastern Mennonite University's Intensive English Program
 - ELS

Note: Candidates with extraordinary circumstances may present alternative evidence of English-language proficiency for consideration by The Graduate School. Graduate admission committees review all applications regardless of scores. For prospective students who believe they have an extraordinary way to demonstrate English language proficiency should send an email including that evidence to grad@jmu.edu, after an application is submitted. For example, The Graduate School will review letters from employers who can attest to a student's ability to conduct business in English. Note that alternative ways of demonstrating English language proficiency can take extra time because The Graduate School must verify the information that is submitted. JMU programs consider requests for exceptions on a case-by-case basis.

Some programs may have more stringent English-language proficiency requirements than those listed above, including specific expectations in the domains of reading, writing, speaking or listening.

- Send your official TOEFL or IELTS scores directly to JMU institution code 5392 from Educational Testing Services (ETS). JMU must receive TOEFL or IELTS scores directly from the testing service.
- Have all funds necessary for expenses during the entire period of the student's stay without resorting to employment while in the United States. If you are admitted into a program and are on an F-1 or J-1 visa you will receive instructions within your acceptance letter to complete and submit the Financial Declaration form along with your proof of funds. International students are permitted to apply for graduate assistantships.
- If the applicant is currently in the U.S. on a student (F-1 or J-1) visa and wishes to transfer his or her visa to JMU, complete an International Student Adviser's Report form.
- Enter the United States on a valid student or other visa.
- International students requiring English language preparation should refer to the website for more details. Students who are conditionally admitted to JMU's graduate degree programs must fulfill their English language requirements by completing the highest level of an approved English language training program within one year of acceptance.

For further information regarding international student applications, contact:

International Graduate Admissions, James Madison University
The Graduate School, MSC 6702
100 E. Grace Street
Harrisonburg, VA 22807

(540) 540-568-6131
grad@jmu.edu

Requests for information concerning federal regulations, visa and health insurance should be directed to:

Director, Center for Global Engagement Office of International Student and Scholar Services (CGEISSS)

James Madison University
MSC 5731
Harrisonburg, VA 22807

<https://www.jmu.edu/global/iss/>

Offer of Admission to The Graduate School

Once an applicant's application has been reviewed by the appropriate program, the program will submit a recommendation to The Graduate School. Applicants will be able to view the admission decision in their Activity Page. The Graduate School will send official written offers of admission to applicants who have been accepted. This letter specifies the effective date of admission (which normally coincides with the semester requested on the application) and the classification of admission being offered (unconditional, conditional or provisional). After being accepted into a graduate program, applicants can then log into their Activity Page and either accept or decline the offer of admission. Students who want to defer enrollment may do so only with the written approval of the graduate director of their academic program and The Graduate School. Under no circumstances may the deferral be for more than one calendar year.

Some programs specify dates by which notice of accepting or declining an offer of admission is due. These dates will be indicated in the letter of admission. Regardless, all applicants must log into their Activity Page and either accept or decline the offer of admission at least two weeks prior to the start date of the semester in which they have been admitted, unless another specific deadline is indicated in the letter of admission. This allows the specific program to invite other candidates. A student who enrolls at another institution is considered to have declined the university's offer of admission. An applicant who has received an offer of admission but who has not responded by at least two weeks prior to the start date of the semester is considered to have declined the university's offer of admission and must submit a new application and fee to be reconsidered for admission at a later date.

Admissions Classifications

Applicants may be admitted to The Graduate School under three classifications: unconditional, conditional or provisional admission.

Unconditional Admission

Unconditional admission indicates that an applicant has met all the entry criteria of The Graduate School and the specific graduate program.

Conditional Admission

Conditional admission indicates that the graduate program has identified specific conditions that must be met before the applicant attains unconditional admission status.

Individual graduate programs determine the conditions of a conditional acceptance and decide when the conditions can be modified or removed. It is the student's responsibility to notify his or her adviser when the conditions of acceptance have been met. The adviser or graduate program director then contacts The Graduate School indicating the change of status. While applicants are encouraged to attain unconditional acceptance as soon as possible, some graduate programs' conditions often cannot be completed until just before graduation, e.g., teacher licensure or competency in a foreign language(s). Master's and educational specialist students have a maximum of six years and doctoral students have a maximum of eight years to complete their graduate programs. All students must attain unconditional status prior to program completion.

Provisional Admission

Provisional admission indicates a probationary status; applicants who have not met all of the requirements of the graduate program to which they are applying may be granted admission under provisional status as prospective candidates for a degree. Such students must have the removal of provisional conditions as a primary objective. An applicant may be admitted to a graduate program under provisional status if:

- the previous academic record is weak.
- prerequisite course work is insufficient.
- the applicant has majored in another field and has not yet clearly demonstrated abilities in the proposed new field.

The requirements for advancement to unconditional status are specified in each applicant's provisional admission letter. It is the student's responsibility to notify his or her adviser when the conditions of acceptance have been met. The adviser or graduate director then contacts The Graduate School indicating the change of status.

The Graduate School determines if graduate credit earned while enrolled in a provisional status is acceptable based on the recommendation of the academic unit head. A student is limited to nine hours of graduate credit in this status. Regulations concerning unsatisfactory progress apply to this classification. See Unsatisfactory Progress for more information.

Appeal of Admission Decision

Although an applicant's admission classification or denial of admission into a program emanates from The Graduate School, all admission decisions, including the denial of admission to a program, are made by the reviewing faculty of the program to which the prospective student applies. As such, any appeal of an admission decision, including denial of admission, must be directed to the individual graduate program.

Change of Program

Admission to The Graduate School and a graduate program does not entitle a student to transfer to a program in another academic unit as defined by The Graduate School.

Any student wishing to change graduate programs must submit a new application for admission, application fee. The student is responsible for meeting all academic unit requirements for the desired program.

Criminal Background Check

Programs may require a criminal history check as part of the final admissions process. The applicant should consult the program to which he or she is applying for more detailed information. Applicants are responsible for any fees associated with background checks.

Continuous Enrollment

All students enrolled in graduate degree programs must enroll each regular semester for a minimum of one graduate credit hour. This registration must continue with no breaks from enrollment in the first graduate program course to graduation. This policy does not include summer sessions.

Students should enroll in courses relevant to their graduate program to facilitate timely completion. If it is not possible to do so, however, The Graduate School has established a one-credit Continuous Enrollment course, GRAD 597. The tuition for this course is \$50.00. No grade will be assigned for this course. For more information, refer to the General Regulations section of the catalog.

Time Limitations

Master's and Educational Specialist Students

Master's and educational specialist students must complete all degree requirements within six years. Academic credit, including transfer credits taken before enrollment in the graduate program, completed more than six years before the date at which the master's or educational specialist degree is awarded may not be used to satisfy the degree

requirements. Students may submit a written petition through their adviser, graduate program director and academic unit head to The Graduate School to receive extensions of time in the event of extenuating circumstances. Such requests must be received at least one month prior to the end of the student's original six-year time limit.

A student whose status is deactivated but later is reactivated through reapplication to The Graduate School may not count the six-year time limit as beginning on the date of reactivation.

Doctoral Students

Doctoral students must complete all degree requirements within eight years. Academic work, including transfer credits taken before enrollment in the graduate program, that was completed more than eight years before the date at which the doctoral degree is awarded may not be used to satisfy the degree requirements. Students may submit a written petition through their adviser, graduate program director and academic unit head to The Graduate School to receive extensions of time in the event of extenuating circumstances. Such requests must be received at least one month prior to the end of the student's original eight-year time limit.

A student whose status is deactivated but later is reactivated through reapplication to The Graduate School may not count the eight-year time limit as beginning on the date of reactivation.

University Residences

Graduate students must register a local address with The Graduate School office prior to initial registration for classes. All changes in local address must be completed through the Student Portal of MyMadison. Official correspondence from the university will be sent to this address.

Admission of Veterans

The Graduate School encourages veterans to apply for admission as full- or part-time students. For information, contact:

Veterans Coordinator

James Madison University
Office of the Registrar, MSC 3528
Harrisonburg, VA 22807

(540) 568-6569
<http://www.jmu.edu/registrar/veterans>

JMU does not determine eligibility for federal veterans' education benefits. Apply through the U.S. Department of Veterans Affairs (VA). The U.S. Department of Veterans Affairs website will guide students through the process, and the VA will notify JMU of veterans' eligibility. The Registrar's Office processes the claims and other paperwork required so students receive payments on time.

Foreign Language

Passing a third-year foreign language course, a reading knowledge of a foreign language or successful completion of a foreign language exam is required in those academic units which so specify. Consult the degree requirements of the academic programs for individual requirements.

Tuition, Fees and Expenses

University Business Office

Student Success Center, Room 5100
738 South Mason Street, MSC 3516
Harrisonburg, VA 22807

Phone: (540) 568-6505
Website: <http://www.jmu.edu/ubo>

Tuition and fee charges for the 2019-20 sessions are available on the University Business Office website. 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 do not include the cost of books or supplies. The university reserves the right to adjust tuition and comprehensive fee charges because of rising costs or other conditions upon approval of the JMU Board of Visitors.

Refer to the University Business Office website for a full description of the tuition and fee rates.

Billing and Registration

Registration for returning students is conducted in April for the fall semester and in November for the spring semester. Students will initially be notified in early August by e-mail when their electronic account statement (Madison Money Manager - M3) is ready for the fall semester and initially notified in mid-December for the spring semester. Thereafter, all new charges, payments and adjustments will be posted electronically in M3. Authorized users will also be e-mailed when student account statements are ready to be viewed. Account statements will be processed twice monthly regardless of changes or balances.

Students are encouraged to review their financial account for amounts due after any registration or course adjustment activity. Students may access their financial account by using their MyMadison link or through the Web link provided in the billing e-mail. Student account balances are due in full by Friday of the first week of classes.

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, stop payment order or account closed.
- There is a late fee for 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 (Friday of the first week of classes), 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 first week of classes to avoid a late fee and/or hold.

Continuous Enrollment

All graduate students enrolled in graduate degree programs must register each regular semester for a minimum of one graduate credit hour from enrollment to graduation. This policy excludes summer sessions. Students wishing to be excused from the requirements of this policy because of extenuating circumstances must solicit exemption from The Graduate School through the Leave of Absence: Continuous Enrollment option. See the General Regulations section for more information on continuous enrollment.

A graduate student who takes an unauthorized break in registration by failing to maintain continuous enrollment will relinquish his or her graduate standing in the university. Students who wish to be reinstated will be required to file an Application for Graduate Admission, pay the admission fee and register for one graduate credit for each term of unauthorized break in registration.

Tuition and Fees

Payment

Payment may be made by the following means:

Remitting payment by check by mail to:

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

By check or cash in person at the cashier's window on the fifth floor of the Student Success Center during regular business hours.

Remitting an electronic check payment or credit card payment online through the M3 – My Student Account link in MyMadison or through the University Business Office website as a guest payer. Pop-up blockers must be turned off to use the MyMadison link. The service is provided by an outside vendor.

Students may pay by a combination of personal check, cash, money order, cashier's check, electronic check and credit cards. Payments from outside the United States should be made through the Western Union link in M3. Foreign currency will be converted to U.S. dollars for payment to the university. 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 or 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.

Audit Fees

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

Specialized Class Fees

Certain courses have additional charges which will be determined at the time the course is offered.

Specialized Program Tuition

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

Examination for Credit Fee

Arrangements for attempting credit by departmental examination may be made by paying a nonrefundable \$50 per credit hour attempted fee to the University Business Office and presenting the receipt to the Office of the Registrar. See General Regulations for more information.

Delinquent Accounts

Service Indicators (Holds)

Only service indicators placed by University Business Office can be cleared by this office. Normally, paying the student account balance with the University Business Office will resolve these holds. Other departments that place service indicators include the Health Center, Parking, Telecom, Registrar, The Graduate School and Financial Aid. Those departments place and release their own service indicators.

Late Fees

A late fee of 3% of the past due balance will be assessed to the student's account if payment is not received by the due date.

Course Cancellation and Returned Check Fee

A \$50 per check fee is assessed for checks returned to the university by the issuing bank as unpaid due to a stop payment order, account closed or non-sufficient funds. If a check is returned, the University Business Office will notify the student by e-mail. 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.

Collection Fees

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. Students are responsible for any collection costs incurred at a rate of 33.33% of the total due.

Students also risk tarnishing their credit rating and will be subject to further enforcement proceedings. Collection efforts are costly to the student. Avoid additional costs by paying on time. Collection fees cannot be appealed. If a student finds that their account has been referred to a collection company, they must 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 account may be turned over to the Virginia Attorney General's Office for litigation. Timely payment is strongly encouraged so that collection efforts can be avoided.

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. A link to the Code of Virginia guidelines can be found on the University Business Office website. 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 the University Business Office.

To qualify for in-state tuition, a graduate 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 or she was domiciled in Virginia and had abandoned any previous domicile, if such existed and that he or she initially came to Virginia for reasons other than education.

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 or 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 Graduate School (graduate students) and/or Outreach Programs (continuing education and non-degree students). Decisions on re-entry students are also made by these respective offices. To establish eligibility, an applicant must complete the uniform domiciliary status questions included in the applications for admission to the university. For information on special provisions of Section 23.1-500 covering military families and persons living out-of-state but employed full-time in Virginia, contact The Graduate School.

Once a student receives an initial determination of eligibility, he or she may appeal for a review of the application by contacting The Graduate School (graduate students) and/or Outreach Programs (continuing education and non-degree students). Appeal for a final administrative review of the decision to deny in-state tuition may be made to the university's Residency Appeals Committee. 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.

Returning students may apply for reclassification from out-of-state to in-state status through the University Business Office. The Reclassification Application Form can be obtained at the UBO web site under "Residency." Denial of a request for such reclassification may be appealed within 30 days to the assistant vice president for finance with a final appeal within 30 days to the Residency Appeals Committee. Petition for review of this final appeal must be made within 30 days to 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 in the University Business Office by Friday at 5:00 p.m. 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. Refer to the University Business Office website and specifically the section "Residency" for the reclassification form and links to the Code of Virginia.

Online Courses

Distance-learning courses are offered only by specific programs. Students enrolled in these courses will be charged a higher tuition rate than students taking traditional courses at the university. Refer to the University Business Office website for current tuition and fees.

Room and Board

Part-time students cannot purchase a housing contract without prior approval of the Office of Residence Life. Residents of university-sponsored apartments are only charged for the room portion of their housing contract. These students and commuter students may purchase one of several meal plans through Card Services.

If students arrive late by 10 or fewer days, their boarding fee will not decrease. The only exception, however, is lateness because of hospital confinement. If students are late because of seven-day or longer stays in the hospital, the university will consider adjusting the board fee. Contact Card Services, Student Success Center, Room 2300; (540) 568-6446 for additional information.

Refunds

Any overpayment of a student account can be either refunded or posted to a future semester as a payment. All overpayments are refunded to the student. All student refunds are handled by the University's vendor, BankMobile. A refund preference must be selected by using the "My Refunds" link in MyMadison or at RefundSelection.com. If you have questions or need assistance after reviewing the refunding instructions on the UBO website, you can contact the UBO office for information at (540) 568-6505.

Withdrawal Refunds

Students who officially withdraw from the university by the deadline for the semester will be refunded all tuition and comprehensive fee payments.

Students who officially withdraw from the university after the deadline for the semester will be responsible for full tuition and comprehensive fee charges, unless their withdrawal is due to an illness certified by a physician or for unavoidable emergency or extenuating circumstances. Tuition reduction must be approved and recommended by the Office of the Dean of Students.

All meal plan charges will be pro-rated, and campus housing charges will be based on the refund schedule listed in the housing contract.

For further information on withdrawal from the university, contact the Office of the Dean of Students.

Financial Declaration for International Graduate Students

This form is not an application for financial assistance. The limited financial aid that is available from James Madison University is competitively awarded on the basis of academic excellence. Assistantships are not need based. The university has no financial resources that are specifically reserved for international students. Only after acceptance into a specific graduate program can any student be considered for financial aid at James Madison University.

All applicants planning to obtain a student visa must complete the Financial Declaration and Certification Form and demonstrate sufficient funds to undertake graduate studies at James Madison University. Applicants who have been awarded a scholarship from an international agency or from their government must attach a letter of award to the form.

Financial Requirements

Instructional fees are listed on the University Business Office website. International students attending James Madison University are required to be full-time degree seeking students and are expected to carry at least nine semester hours of credit for each semester they are enrolled.

Living expenses in Harrisonburg are estimated to be \$800-\$900 per month or \$9,600-\$10,800 (including \$2,000 per year for miscellaneous expenses) per calendar year. The total amount to be certified is \$30,890 per academic year. Additional amounts are required for a spouse and per child. Students who wish to study during the summer sessions should be aware that those additional educational expenses range between \$2,000 and \$3,000. Tuition rates are subject to change.

Projected Financial Requirements

Admission is limited to applicants who are able to guarantee that they have all the funds necessary for their expenses for the entire period of their stay without resorting to employment while in the United States. An international student should expect living expenses in Harrisonburg to increase approximately 10% per year and tuition fees may increase as much as 30% each academic year.

Availability of Funds

It is required that all tuition and other university fees be paid prior to the semester registration period in which the student wishes to enroll.

Tuition and fees and payment due dates are listed in the graduate catalog for each academic year. Specific payment procedures are addressed in the Schedule of Classes published for each semester.

Employment

International students may not accept employment off-campus.

Scholarships, Grants, Student Employment and Loans

Office of Financial Aid and Scholarships
Student Success Center, Room 5200
MSC 3519

Phone: (540) 568-7820

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

Assistantships

Website: http://www.jmu.edu/grad/current-students/assistantships/assist_info.shtml

Each year, James Madison University makes funds available through the graduate assistantship program. Although limited in number, assistantships contribute significantly to academic and non-academic areas of the university. Assistantships provide financial assistance to qualified students who otherwise might be unable to pursue graduate degrees. They also offer opportunities for students to gain worthwhile teaching and other experiences relevant to their chosen disciplines.

Assistantships typically include a stipend and tuition. The amount of the stipend can vary depending on the type of assistantship (doctoral assistant, graduate assistant, teaching assistant, etc.), the source of the funding and other factors. The tuition portion of the award can also vary and is especially impacted by a student's residency status. International students are eligible for assistantships.

Students will be awarded assistantships for a maximum of four academic semesters (exclusive of summer session) in most master's and educational specialist degree programs and a maximum of three years in the Master of Fine Arts and doctoral programs. Assistantships are typically limited to nine paid graduate hours of tuition each fall and spring semester, although doctoral assistantships can include summer terms. Contracts are usually written for an academic year. Assistantships may not cover the tuition for all courses required by an academic program. Students must pay for any additional hours each semester at the tuition rate based on residency status. Tuition will be covered at the on-campus rate for the hours stated on the contract.

Any additional charges for Web-based courses will be the responsibility of the student. Under no circumstances will payment from assistantship funds be used for audited course work or undergraduate hours. Assistantships do not cover the student's room and board expenses. No tuition or stipend is paid through the assistantship program for summer enrollment.

Acceptance of an offer of financial support—such as a graduate scholarship, fellowship, traineeship or assistantship—for the next academic year by a prospective or enrolled graduate student completes an agreement that both student and graduate school expect to honor. In that context, the conditions affecting such offers and their acceptance must be defined carefully and understood by all parties. Students are under no obligation to respond to offers of financial support prior to April 15; earlier deadlines for acceptance of such offers violate the intent of this resolution. Read the Council of Graduate Schools' Resolution Regarding Graduate Scholars, Fellows, Trainees, and Assistants for full details (http://www.jmu.edu/grad/_files/cgs-resolution.pdf).

Classification of Assistantships

Doctoral Assistant

Doctoral assistants are assigned to academic units to assist faculty members in their responsibilities of teaching and/or research. Students enrolled in doctoral programs at JMU may serve as doctoral assistants. Doctoral assistantship stipend and tuition packages vary by program and may extend across all semesters, including summer.

Graduate Assistant

A graduate assistant is assigned to an academic unit, support program or administrative office to assist faculty members in preparing for instruction, leading discussion groups, grading papers, conducting research, preparing laboratories, performing departmental administrative tasks, etc. Specific duties will vary according to the needs of the department. All full-time graduate students, including first semester students, are eligible for graduate assistantships.

Teaching Assistant

A limited number of teaching assistantships are available in academic units offering major programs of graduate study. A teaching assistant is assigned to an academic unit and is required to instruct one course or three credit hours of course work each semester or an equivalent of three credit hours of laboratory work each semester. Students may also be awarded a teaching assistantship to assist professors within the department with instructor related duties. All graduate students, including doctoral students, who have completed a minimum of 18 hours of appropriate graduate course work are eligible to serve as teaching assistants. In some cases, graduate assistants must complete specific courses in their academic programs to be eligible to serve as teaching assistants. Teaching assistants must be directly supervised by a graduate faculty member.

Assistantship Hours

In accordance with university policy guidelines, graduate assistants will provide an average of 20 hours of assistance each week. Graduate assistants cannot be asked to perform more than an average of 20 hours per week unless special permission is granted from The Graduate School. Visa requirements stipulate that international students may not in any circumstances work more than 20 hours per week. Students may not begin their assignment prior to completion and submission of all required forms.

Additional JMU Employment for Graduate Assistants

Graduate students receiving stipends from Virginia state funds are occasionally permitted to accept JMU employment in addition to the 20 assistantship hours. Such employment requires formal permission from The Graduate School, in response to a request by the student's graduate director or adviser. The student and the director or adviser should carefully consider the potential effect of additional employment on the student's academic performance before granting permission for additional work.

Under the Affordable Care Act (ACA), part-time employees, including students receiving assistantships, may work no more than 29 hours per week. Additional employment must be approved prior to the initiation of work, and the number of hours worked in any given week must total 29 hours or less.

Application for Assistantships

Application Process

A student interested in a graduate assistantship should inform the graduate program to which he/she is applying of his/her interest in an assistantship. Some programs have the ability to offer assistantships to their own students, and some have agreements with other departments to recommend applicants for their positions. If a student cannot find an assistantship through their home program, students may want to choose to apply for an assistantship that is posted online.

To apply for an assistantship:

- Go to <http://www.jmu.edu/humanresources/emp/joblink.shtml>.
- In the "For Applicants" section, select "click here" to enter JMU JobLink.
- Click "View/Apply for Graduate Assistant Positions."
- Click "View" for the Working Title of each position.

Complete and submit the application for the appropriate position. Assistantship departments contact applicants directly to set up interviews. After selecting a Graduate Assistant, the department will create the contract materials and forward them to The Graduate School. The graduate assistant will sign the contract, complete the tax forms and return them immediately to the assistantship department so information can be entered into the payroll system.

Questions concerning assistantships should be made directly to the graduate program or department offering the assistantship.

Criteria

To be eligible for assistantship consideration, students must:

- Be conditionally or unconditionally accepted into a specific graduate program (provisionally accepted students are not eligible for assistantships).
- Have official transcripts on file in The Graduate School indicating completion of the baccalaureate degree from a regionally accredited institution.
- Carry a full course load of nine credit hours during each semester of the assistantship.

Deadlines

Some academic units may require specific deadlines for assistantship applications. Consult the appropriate academic unit for their application deadline.

Academic Load

The following academic load guidelines apply to all graduate assistants. Graduate assistants must:

- Carry nine credit hours each semester.
- Receive prior approval from the graduate program coordinator when planning to register for more than nine credit hours.
- Pay for any additional credit hours above the nine paid for by their assistantships.
- Pay for the additional cost of any Web-based courses.
- Not take fewer than nine credit hours without prior written approval from The Graduate School. This underload of classes to no fewer than six credit hours is allowed only once during a graduate career.

For courses to be covered by assistantship funding, graduate assistants must enroll each semester during the regular registration period(s) and prior to the tuition refund date as published by the Office of the Registrar. Students who register for additional courses after this time will be personally responsible for additional tuition and fees. Students who drop courses after the tuition refund date will be responsible for tuition and fees and will receive a grade of "W" for the course. Exceptions may be made only for documented extenuating circumstances and will be handled on a case-by-case basis by the dean of The Graduate School. Students must contact the Office of the Dean of Students if all courses are dropped to withdraw from the university.

Conditions of Continuation in Assistantship

Graduate assistants are required to make satisfactory progress toward their degrees. A student who receives a notification of dismissal from their program cannot retain their assistantship. To retain or reapply for an assistantship, students must maintain a 3.0 graduate GPA or higher. A student who receives a notice of academic warning during the fall semester must receive permission of their program and their assistantship department to continue her/his assistantship during the spring semester.

To continue an assistantship, students must enroll in a minimum of nine credit hours of graduate course work each semester. An assistantship can be retained if the student receives formal approval from The Graduate School to take fewer than nine credit hours (an "underload") during a particular semester. Requests to complete fewer than six graduate credit hours are never approved. Only one underload semester may be granted during a graduate assistant's program of study.

Forfeiture of Assistantship

Students who leave the university or fail to perform the duties under their assistantships lose their eligibility for an assistantship. Students who violate a university policy or state or federal law may be required to forfeit their graduate assistantships. In such case, the university may withdraw tuition payment and will have no further obligation to continue to pay a stipend. In some cases, students may be expected to pay the university for tuition for the current semester.

Federal Financial Assistance Programs

The Office of Financial Aid and Scholarships helps qualified students secure a financial aid package designed to meet their financial needs. In most cases, students who have earned a bachelor's degree are no longer eligible to receive federal and state grants, with the exception of the tuition portion of the assistantships mentioned in the prior sections, which may use state dollars to fund the waiver. Therefore, the award package for graduate students generally consists of loans and work-study eligibility.

Students interested in information on financial assistance programs, including scholarships, should visit the financial aid website (<http://www.jmu.edu/financialaid/>), contact the Office of Financial Aid and Scholarships or send an e-mail to fin_aid@jmu.edu. A general overview of the aid process and basic consumer information can be found by reading the JMU Terms and Conditions for Financial Aid – Consumer Information document available at <http://www.jmu.edu/financialaid/terms-and-conditions.shtml>

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 facilitate timely processing of financial aid, 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.

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

- Federal Unsubsidized Direct Loan
- Federal Grad PLUS Direct Loan
- Federal Work-Study Program
- Need-based Foundation Scholarships

When a student files the FAFSA, the federal processor calculates his/her 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).

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 the general eligibility requirements for aid as defined by the FAFSA.
- Maintain Satisfactory Academic Progress requirements (described later).

Students offered financial assistance by JMU will receive electronic notification regarding their financial aid eligibility. The financial aid office will send a notice to the JMU e-mail account, which directs students to MyMadison, where they may view and interact with their financial aid package. The aid notice 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 section of their MyMadison account. If any of the information included in the financial aid package or award notification is incorrect, the student should immediately notify the Office of Financial Aid and Scholarships. Financial aid is awarded based on FAFSA information, as well as the student's status at JMU (e.g., academic level, enrollment status and residency).

Federal and state regulations also require the Office of Financial Aid and Scholarships to consider any outside sources of assistance when awarding 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 notices are usually sent in early summer.

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, room, board, books and supplies, travel and personal. Room and board 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.

Satisfactory Academic Progress

To be eligible to receive financial assistance, students must be making satisfactory progress toward graduation as defined by The Graduate School and the Office of Financial Aid and Scholarships. Financial aid standards are available on the financial aid website.

Student Loans

Information about student loans is available on the financial aid website.

Federal Direct Loan Program

The Unsubsidized Direct Loan is a long-term, low-interest loan for which undergraduate, graduate and professional students may apply. The interest rate on each loan is fixed on July 1st of the award year. Students can view current year interest rates at www.jmu.edu/financialaid/. 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.

Graduate students may borrow no more than \$20,500 per year, or no more than the established Cost of Attendance, whichever is lower. In addition, graduate students may borrow no more than \$138,500 during their graduate career, which includes loans received for undergraduate study. For students who received prior Federal Stafford Loans at JMU or another institution, the debt total is the sum of all Direct and Stafford Loans.

Federal Grad PLUS Direct Loans

The Grad PLUS is a credit-based loan. Grad PLUS borrowers may apply for an amount up to the cost of attendance minus any other financial aid received by the student for the academic year. The interest rate on each loan is fixed on July 1st of the award year. Students can view current year interest rates at www.jmu.edu/financialaid/. Interest begins to accrue on the date of the first loan disbursement. The first payment is due within 60 days of the last disbursement for the loan period. At times a Grad PLUS borrower may receive a deferment while he or she is enrolled at an eligible school. Contact the Direct Loan Servicing Center for details regarding this provision. Students must meet the same general eligibility requirements for federal financial aid that must be met in order to receive a Federal Direct Loan.

Applications for the Federal Grad PLUS Direct Loan are available on the financial aid website, but students should not submit an application until they have received a financial aid award notice explaining their eligibility.

Alternative Loans

Some banks offer credit-based alternative loans to students who either do not qualify for the Direct or Grad PLUS loans or cannot receive enough money through these loan programs to cover their educational expenses. Terms of these private loans vary, but interest rates are normally higher than for the Direct Loan or Grad PLUS. The financial aid office strongly encourages students 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

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 at <http://www.jmu.edu/scholarships>.

Private 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:

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

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

Ronald E. McNair Post-Baccalaureate Achievement Program

This program is named in honor of Dr. Ronald E. McNair, the laser physicist and Challenger space shuttle astronaut. Funded through a grant from the United States Department of Education, the objective of the McNair Programs are to increase the numbers of low-income, first-generation and underrepresented minority undergraduates who pursue doctoral degrees, specifically the Ph.D., and go on to careers in research and teaching at the university level.

Application fees to The Graduate School will be waived for McNair applicants. For more information on the McNair Programs, refer to the website.

Employment

The Graduate School recognizes that many graduate students depend upon part-time or full-time employment to meet expenses. Though there is no limit to the maximum number of credit hours employed students may take, students and advisers should realize that a course schedule should take into consideration the demands of employment.

Student Employment

JMU employs both graduate and undergraduate students in academic, administrative or service oriented areas. Students must be degree seeking and enrolled on at least a half-time basis during the academic year 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. For more information see the Student Employment website (<http://www.jmu.edu/student-employment/>).

Federal Work-Study Program

Federal Work-Study (FWS) can be part of the financial aid package for students who demonstrate financial need as determined by their FAFSA. Students who are offered FWS will need to apply and interview with employers to secure a position; however, employment is not guaranteed. To obtain information about available FWS positions, refer to the student employment website. 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 the student employment website. 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 jobs 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 jobs beyond graduation. To obtain information about available positions, refer to the student employment website.

Equal Opportunity

Office of Equal Opportunity and Title IX

MSC 5802
1017 Harrison Street
Harrisonburg, Virginia, 22807

Phone: (540) 568-6991
Fax: (540) 568-7992
TDD: (540) 568-2278
Website: www.jmu.edu/oeo/

James Madison University does not discriminate and will not tolerate discrimination on the basis of age, color, disability, gender identity, genetic information, national origin, parental status, political affiliation, race, religion, sex, sexual orientation or veteran status. Conduct by a member of the university community that constitutes discrimination or harassment on the basis of any protected class is a violation of university policy and is sanctionable.

Inquiries or requests for reasonable accommodation may be directed to the activity coordinator, the appropriate university office or the Office of Equal Opportunity. More information is available through the Office of Equal Opportunity website.

University Withdrawal

If students withdraw from their graduate program or the university, the University Business Office may adjust their charges based upon their withdrawal date and the JMU Refund Policy. For the university refund policy, refer to the University Business Office website (<http://www.jmu.edu/ubo/>).

Regardless of any adjustment to a student's charges, if he or she withdraws from the university, financial aid may be adjusted based on the percentage of the semester completed before withdrawal. In some cases, Federal Return of Title IV Funds regulations may require that aid be returned to the federal government for students who withdraw from JMU before 60 percent of a term has been completed. Financial aid is awarded for the entire term, which is generally a 15-week period. If a student does not complete the entire 15 weeks, then the Return of Title IV Fund rules will determine how much financial aid has been earned. The student can keep the earned amount for the term, but the unearned portion must be immediately returned to the federal government. In some situations, this will leave the student with a balance owed to the university. Funds are returned to the federal government in the following order: Grad PLUS and Unsubsidized Direct. See the JMU Terms and Conditions for Financial Aid – Consumer Information document in the "Quick Links" section at <http://www.jmu.edu/financialaid/> for a sample calculation

Student Services and Learning Resources

Academic Affairs Mission Statement

Phone: (540) 568-6616 **Website:** <http://www.jmu.edu/acadaffairs>

The Division of Academic Affairs is a community of scholars engaging students in the collaborative construction and application of knowledge through intellectual pursuits in teaching, learning, research, inquiry, creative activity and service.

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>

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

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 used by the academic units, as well as a large selection of general and technical books. The store also sells school supplies, office computer supplies, Apple and Dell computers, software, clothing, gifts, magazines, and greeting cards. For students' convenience, the bookstore provides services including special orders for books, textbook buy back, gift cards, bus tickets and computer services.

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: West Campus Dining Hall **Phone:** (540) 568-6751 **Website:** <http://www.jmu.edu/dining>

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 Plans

Students living on campus are required to purchase a meal plan. Each meal plan contains a set amount of punches to allow entry into all-you-care-to-eat dining halls and Dining Dollars to purchase food à la carte at retail dining locations. Dining Dollars GOLD can also be added for additional spending. Cash and credit card sales are welcome at all dining locations. Personal eating habits, class schedule and leisure activities should all be considered when choosing a meal plan.

Special Diets

We pride ourselves on providing the information and knowledge necessary for students with food allergies, celiac disease and other medically-prescribed diets to make informed food choices in our dining locations. We ensure all dining employees undergo a certified allergy training during on-boarding. To learn more about our special diets program, reach out to our registered dietitian at (540) 568-5731.

Parking Services

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

Parking Services offers annual, semester and daily parking permits to eligible members of the university community. Permits are available to campus visitors, free of charge, upon presentation of a valid driver's license and vehicle registration. The department also maintains parking meters throughout the campus that are intended to provide convenient, short-term parking to faculty, staff, students and visitors. Any vehicle parked on university-owned or leased property is required to display a valid JMU parking permit. Hard copies of the Parking Handbook are available free of charge upon request at Parking Services.

Print Services

Location: Medical Arts, Suite 31, MSC 5722 **Phone:** (540) 568-7300 **Location:** Engineering/Geosciences (EnGeo), 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. 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. Both locations offer computer labs for working on projects with access to the production machines to complete projects.

Career and Academic Planning

Location: Student Success Center, MSC 1016 **Website:** <http://www.jmu.edu/cap>

Advising: Room 3210 Interviewing: Room 3250

Phone: (540) 568-6555

Employer Services

Phone: (540) 568-7379

Career and Academic Planning coordinates academic advising for all first year students, advises undeclared students, assists all students in choosing or changing their major and deciding on a career direction, and supports the career readiness of all students through a variety of job search programs, graduate school application services, and opportunities for students to connect with employers for jobs and internships.

Career Advising and Decision Making

Career and Academic Planning helps students understand the process of deciding on 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.

Career Resources and Online Tools

The Career and Academic Planning website offers several free online tools to help students explore majors and career options, research employers and industries, and develop interview skills. Students are able to connect directly with internships, jobs, graduate schools, and programs and services offered by Career and Academic Planning. These online tools include the Career Guide to JMU Majors, FOCUS, Vault, InterviewStream and Handshake.

Graduate School Information

JMU offers a graduate and professional school fair open to all majors every fall semester. Information on the process of applying to graduate or professional school is available on Career and Academic Planning's website. Students can also make an appointment with a career adviser for individual assistance.

Internship and Job Search Services

Companies and organizations representing a wide variety of industries including, business, government, non-profit and educational employers come to JMU throughout the year to conduct job interviews with graduating seniors and internship interviews for all class levels. The Career and Academic Planning 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 on-campus interviews and thousands of positions. Students can also connect with employers and receive feedback on their interviewing skills at InterviewPREP, a one-day interview practice event hosted in the Career and Academic Planning interview center.

Resume Development

CAP offers many resources to assist students with writing resumes. Students can access resume writing resources via the CAP website and participate in resume writing workshops and other programs throughout the year. Students can also meet with career advisers for individual assistance by making an appointment or attending drop-in resume reviews.

Career Fairs

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

Job Search Assistance

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 InterviewStream, a web-based interviewing practice application that is available at any time. InterviewStream allows students to record a practice interview related to their major or career choice, review the videos themselves and share it with others for feedback. Job postings for all majors can be found on Handshake, a web-based job search system. Students can use the Vault online industry guides to research specific career fields, obtain job search tips and find additional job listings.

Internships

Handshake and the Career and Academic Planning 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. Vault is an online resource with extensive internship listings. 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.

Center for Assessment and Research Studies (CARS)

Location: Lakeview Hall

298 Port Republic Road, MSC 6806

Harrisonburg, VA 22807

Phone: (540) 568-6706

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

Mission

The mission of the Center for Assessment and Research Studies (CARS) at James Madison University is to provide quality assessment service to the university, to provide applied graduate training in both assessment and measurement, to increase the use of innovative technology in assessment practice, to increase the rigor of measurement and statistical techniques used in assessment practice, and to produce quality scholarship in assessment and measurement.

Vision

To be nationally recognized as a standard of excellence for practice, programs and scholarship in assessment and measurement.

Values

Quality: We value quality in all of our endeavors.

Innovation: We value the use of innovative technology and the use of more rigorous measurement and statistical techniques in assessment and measurement.

Appropriateness: We value a match between the technology or measurement/statistical technique being used and the assessment-related questions being asked.

Research: We value rigorous study of the instruments, technologies and measurement/statistical techniques used to answer assessment-related questions.

Accuracy: We value accuracy in all assessment endeavors, including: the collection of data, the reporting of assessment results and in the application of measurement and statistical techniques.

Multiple Roles: We value our faculty and students having multiple roles and desire both faculty and students to simultaneously be practitioners, teachers, scholars and learners.

Collegiality: We value partnerships with each other, other programs on campus, other institutions of higher education, and other communities in assessment, measurement, and statistics.

Communication: We value open and clear communication with each other and the people we serve.

Diversity of Interests: We are a diverse learning community that promotes mutual respect. We value the variety of faculty and student interests and competencies in assessment, measurement and statistics as well as the various paths and related academic fields that have attracted them to CARS.

Center for Assessment and Research Studies Faculty

- Dr. Alison J. Ames, Assistant Assessment Specialist
- Dr. Deborah Bandalos, Ph.D. Program Director
- Dr. Christine DeMars, Senior Assessment Specialist
- Dr. Sara Finney, Senior Assessment Specialist
- Dr. Keston Fulcher, Executive Director
- Dr. John Hathcoat, Assistant Assessment Specialist
- Dr. Jeanne Horst, Assistant Assessment Specialist
- Dr. Dena Pastor, Senior Assessment Specialist
- Mr. David Yang, Information Security Analyst

Center for Faculty Innovation

Location: Rose Library, Fifth Floor

Phone: (540) 568-4846

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

The Center for Faculty Innovation (CFI) provides comprehensive professional development opportunities for JMU instructional faculty at all levels and stages of their careers. CFI initiatives are designed to enhance academic culture and support innovations in teaching, scholarship, and career development. The CFI is staffed by tenured and tenure-track instructional faculty who, as teacher scholars in their academic disciplines, are committed to creating a sense of shared community grounded in academic excellence.

The CFI pursues its vision of comprehensive professional development for all faculty through collaborative partnerships with the JMU community by implementing and assessing of a range of scholarly-based programs. Further, the CFI embraces issues that transcend the individual faculty role, striving to make meaningful contributions to local dialogues and global dynamics. Finally, the CFI strives to enhance academic culture through scholarly initiatives that reflect on the quality and changing nature of higher education.

JMU graduate students are welcome to participate in most CFI activities.

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>

Semester Abroad Programs

Recognizing its responsibility to provide international experiences to JMU students, the university sponsors semesters abroad in Antwerp, Florence, London, Salamanca and Scotland. 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 at least a 2.0 grade point average.

Semester in Antwerp

Offered during the fall, spring and summer semesters, 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. 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. This program is open only to business majors who have been accepted into COB 300. No foreign language is needed to participate in this program.

Semester in Florence

The program curriculum for the Semester in Florence program highlights the Renaissance tradition of the city through art, literature and culture-related courses, as well as focusing on 20th- and 21st-century Italy and Europe through politics and history. Previous background in Italian is not required; however, students must take at least 3 credit hours of Italian while in Florence. Offered all 3 semesters, fall, spring and summer, this program gives students the opportunity to complete 6 credits toward the General Education requirement for arts and humanities. 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. All courses are taught in Spanish; thus, all applicants must have completed the intermediate level of Spanish (SPAN 232) prior to departure. Upon arrival in Salamanca, students enroll in a 3-credit intensive language class at the level appropriate to their needs during their first month abroad. This requirement permits time for students to adapt to Spanish language and culture before entering regular semester courses.

College of Education students also have the option of a semester program specifically for them, taking place every spring semester. Offering four required courses and a practicum in local schools, the program integrates the study of educational foundations, student diversity and pedagogical instruction with the exploration of Spanish history and culture.

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. 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.

Summer Abroad Programs

During the summer, many international courses and travel study classes (80-90 programs) are offered. Specific course offerings vary from year to year. A typical summer schedule might include classes in Argentina, Australia, Belgium, Cameroon, Canada, China, Costa Rica, England, France, Germany, Ghana, Greece, India, Ireland, Italy, Japan, Jordan, Kenya, Lebanon, Madagascar, Malta, Mexico, Montreal, Morocco, the Netherlands, the Philippines, Scotland, South Africa and Spain.

Program Cost

The programs' costs differ, but all programs include tuition, housing, a basic food allowance, course-related travel, including extended weekend trips, instructional events, such as theater, concerts, historical tours and guest lectures, and some social activities.

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 live in a central, convenient part of each city and have ready access to the faculty member in residence or the on-site director if any health problems or emergencies arise. 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/cap>

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

Cohen Center for the Humanities

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

The Cohen Center for the Humanities fosters intellectual engagement, interdisciplinary collaboration and a strong sense of community for all graduate students. The center values student empowerment, community, diversity and collaboration. Through programming that includes lectures, workshops and visiting scholars, the center serves as a hub for humanistic inquiry.

Community Service-Learning

Location: Student Success Center, 2nd Floor
Room Suite 2100, MSC 1011

Phone: (540) 568-6366

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

Community Service-Learning (CS-L) cultivates positive social change through mutually beneficial service partnerships, critical reflection and the development of engaged citizens. 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 80 community agencies by enrolling in a service-learning course or by coming to the CS-L office.

Students eligible for Federal Work Study can earn their financial aid by tutoring in local elementary schools to improve reading comprehension or by working in local nonprofit organizations to address a variety of community needs.

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 winter, spring and May breaks. Weekend Breaks are also offered each semester to work with communities within four hours of JMU. Breaks fill up quickly, so check the CS-L website regularly for registration information.

Counseling Center

Location: Student Success Center, Room 3100, MSC 0801

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

Phone: (540) 568-6552

The Counseling Center provides free, confidential personal counseling services to all full-time JMU students. Initial visits do not require an appointment, as the Counseling Center has walk-in hours Monday – Friday, 10AM – 3PM. After-hours crisis services may be accessed by contacting the Office of Public Safety (568-6911).

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

Services include:

- Personal 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 lives. The Counseling Center operates under a short-term treatment model in which the student and counselor collaboratively identify and address the student's primary concerns within a limited number of sessions. Students who request or require longer-term treatment are referred to community resources.
- Specialized Treatment Programs:
 - Tackling Anxiety: This treatment program provides effective strategies and interventions to reduce anxiety, worry, nervousness and panic symptoms.
 - Tackling Society: This treatment program helps reduce social anxiety symptoms and increase confidence, assertiveness and connection.
- Group Counseling: Each semester, students may participate in small group experiences on issues related to their needs (e.g., depression, eating disorders, anxiety, grief, etc.).
- Sexual Trauma Empowerment Program (STEP): The Counseling Center provides crisis, individual and group counseling to students who are survivors of sexual assault. Referral services are also available to students who choose to pursue judicial charges through JMU or criminal charges through the court system.
- Psychiatric Services: The Counseling Center has psychiatric providers who prescribe medications that may be helpful to students dealing with psychological issues. Only students who are currently engaged in ongoing treatment at the Counseling Center are eligible to receive these services. The cost of any medication and/or necessary lab work is the financial responsibility of the student. Students who are exclusively interested in psychiatric services are provided an off-campus referral.
- Consultation: In person or over the phone, the Counseling Center provides consultation to students, faculty, staff and others who are concerned about the distressed, unusual, problematic or potentially harmful behavior of others.
- Outreach Programming: Workshops on a wide variety of mental health topics may be requested by visiting the Counseling Center online.
- Peer Mentor Program: This program is designed to help first year and transfer multicultural and international students make a successful transition from high school to the university.

Graduate Student Association

Website: <https://www.jmu.edu/grad/graduate-student-life/gsa>

Email: gsa@jmu.edu

The Graduate Student Association (GSA) is a student-led and student-run organization that provides professional and social opportunities to all past, present and future James Madison University graduate students. The GSA was established in 2010 and is growing steadily in the form of participation and events. The GSA conducts workshops and other professional development activities for graduate students, sponsors networking events and social opportunities.

Every graduate student is considered a part of the GSA. There are no fees.

Information Technology

Website: <http://www.jmu.edu/computing/af>

Information Technology Help Desk

Students have access to the Information Technology Help Desk for answers to computing questions. Students may call the Information Technology Help Desk at (540) 568-3555, or visit <http://www.jmu.edu/computing/helpdesk>.

Computing Policies

Policies regarding computer use are available on the University Policies Web site. Refer to University Policies: 1201, Information Technology Resource Management; 1204, Information Security; 1205, University Data Stewardship; 1207, Appropriate Use of Information Technology Resources; and 1209, Electronic Messaging.

Computer Purchases

The JMU Bookstore offers computer systems, software and peripherals at special contract pricing. Customized Dell and Apple computer systems are configured to meet JMU network and academic guidelines. Dell and Apple hardware warranty repair services are also available to all students.

Computer Security

Students can learn how to operate their computer safely through the R.U.N.S.A.F.E. program at <http://www.jmu.edu/computing/runsafe/>.

Connecting to the JMU Network

CampusNet is the on-campus student network in residence halls which has high-speed access. Many off-campus apartment complexes provide Ethernet connections to the JMU network. Contact Off Campus Life to find out which apartment complexes provide this service.

Wireless is also available on campus. There are 160 access points in over 65 different locations including the libraries, bookstore, Top Dog Cafe and quad. Wireless is available in all academic buildings and in designated areas in the residence halls. For a complete listing of university-provided wireless locations, visit the Computing website.

A Wireless Open House is offered in the fall for students to set up their wireless laptops and ask questions.

Electronic Identification

All JMU students receive an electronic identity (e-ID) free of charge as they enroll at the university. An e-ID is automatically generated from the name submitted on a student's admissions application. This electronic identity can be used to send and receive electronic mail and for access to a variety of other systems and services.

Student Computer Labs

More than 500 Windows and Macintosh computers are available in student labs throughout campus. The labs offer a variety of word processing, spreadsheet, graphics, presentation and statistical software. There are two labs open 24 hours a day, seven days a week. To view the locations and hours of the labs, or to find specific software, visit the Computing Web site at <http://www.jmu.edu/computing/>.

JMU Libraries & Educational Technologies

Carrier and Rose Libraries, Music Library, Educational Technology and Media Center, Visual Resources Center

Phone: (540) 568-6150

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

JMU Libraries & Educational Technologies (LET) engage with JMU's diverse communities in their creation and search for knowledge through academic resources, physical and virtual spaces, and educational and research services. LET values adaptability, collaboration, diversity, learning and strategic innovation. LET nurtures a user-oriented focus in helping students, faculty and staff succeed at JMU.

LET is here to support students' academic success. It provides comfortable, safe places to learn, create, explore and collaborate, as well as collections, technology and help from knowledgeable faculty and staff. Students who take full advantage of the libraries' resources early in their academic careers are more confident and skilled when it comes to doing university-level research.

LET recognizes that a big university library system can be overwhelming. It offers assistance navigating the libraries and educational technology services at the help desks, via email or online chat, or by appointment. LET manages the Madison Research Essential Skills Test (MREST), a General Education requirement for all freshmen and select transfer students. LET also provides online tutorials and walk-in workshops on a variety of information literacy and technology topics, from finding articles for papers to 3D printing. Every major has a dedicated librarian, who will teach in classes and work with students at any stage of their university careers. There are two main libraries (Carrier on West Campus and Rose on East Campus) that each provide study, collaboration and maker spaces, and several small branches.

Center for Instructional Technology

Phone: (540) 568-7061

Website: <http://cit.jmu.edu>

The Center for Instructional Technology (CIT) is a central resource for the development and exploration of instructional technologies. CIT staff and student associates are available to serve faculty and staff on a walk-in basis or by scheduling an appointment for focused assistance. CIT staff work with faculty on instructional planning, design of instructional materials, production of instructional materials and coordination of resources for project implementation. In the walk-in production facility, faculty, staff and students can check out digital cameras, master a CD-ROM, scan flat art and 35mm slides, and create color prints, transparencies, digital graphics, publications, classroom presentations and Web pages. In addition, a technology teaching station is available to practice professional and classroom presentations.

The center is also available for JMU students. Students assisting faculty members with the development of materials may use the center during open hours after the requesting faculty member has signed an authorization form. Students working on class projects may use the center during evening hours.

The center offers a variety of faculty development opportunities including hands-on workshops, in-depth technology concentrations, informal discussions and scheduled project support sessions. The center's instructional technology grants program, mGrants, encourages faculty to develop and implement creative methods of instruction. These grants provide faculty with consulting services, support services and funding to design and develop course materials, experiment with new teaching models and promote active learning.

Learning Centers

Location: Student Success Center, Room 1164

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) 568-1759

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

Digital Communication Consulting

Location: Student Success Center, Room 1146

Phone: (540) 568-5184

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

DigiComm's team of trained peer tutors offers one-on-one assistance for any JMU student or faculty member working on a digital project.

Our areas of expertise include:

- assignments utilizing Wix, Weebly, WordPress or other online web builders
- creating your own personal brand and professional portfolio for the job market
- digital storytelling platforms such as Atavist and Spark
- utilizing interactive content tools that bring stories to life.

English Language Learner 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 1119

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. Consult the website for a current list of supported courses. The SMLC is equipped with a 34 unit 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

Non-Discrimination Statement

Notice of Non-Discrimination and Equal Opportunity

James Madison University does not discriminate on the basis of age, disability, race or color, national or ethnic origin, political affiliation or belief, religion, sex, sexual orientation, gender identity or expression, veteran status, parental status (including pregnancy), marital status, family medical or genetic information, in its employment, educational programs, activities, and admissions. 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 Office of Equal Opportunity:

Office of Equal Opportunity

James Madison University
1017 Harrison Street, MSC 5802
Harrisonburg, VA 22807

(540) 568-6991
oeo@jmu.edu

JMU prohibits sexual and gender-based harassment including sexual assault and other forms of inter-personal 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, Title IX

James Madison University
100 East Grace Street, Suite 4033, MSC 7806
Harrisonburg, VA 22807

(540) 568-5219
titleix@jmu.edu

Off-Campus Life

Location: Festival Conference & Student Center,
Room 1130

Phone: (540) 568-6071

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

The Office of Off Campus Life (OCL) assists students gain the necessary knowledge and skills to make informed decisions within the JMU off campus community. They can assist with legal and community responsibilities, leasing and subleasing, working with landlords, budgeting, etc. The office maintains a database of available housing in the local area.

Office of Disability Services and Learning Strategies

Location: Student Success Center, Suite 1202

Phone: (540) 568-6705

Fax: (540) 568-7099

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

Disability services collaborates with the JMU community by providing programs and services that support the university in creating inclusive, equitable environments that value disability, diversity, and accessibility. Services include:

- Equal access to university programs and services
- Provision and coordination of reasonable accommodations
- Disability-related support services
- Liaison to faculty, staff and students on disability related issues

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 & 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 Carrier Library (Room 119), Rose Library (Room 1204) and the Student Success Center (Suite 1202).

Learning Strategies Instruction

Email: lsi@jmu.edu

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

Learning Strategies Instruction (LSI) is the direct-instruction of curriculum-based strategies designed to improve the actual process of learning. Available to any student, LSI promotes learning efficiency in current courses and is available in such areas as:

- Memory
- Note-taking
- Reading comprehension
- Studying
- Test-taking
- Time management

Screening & Referral Service

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

This office provides a one- and one-half 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 make process for recommending the next steps in the process.

Office of Equal Opportunity

Location: 1017 Harrison St., MSC 5802

Phone: (540) 568-6991

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

The Office of Equal Opportunity administers JMU's commitment to providing an equitable and safe environment for the entire JMU community. 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.

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 due to age, color, disability, gender identity, genetic information, national origin, parental status, political affiliation, race, religion, sex, sexual orientation or veteran status may file a complaint with the OEO. Our office investigates complaints of discrimination and harassment and provides preliminary findings.

Office of Student Accountability and Restorative Practices

Location: Student Success Center, Room 2122

Phone: (540) 568-6218

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

We support JMU's mission by developing and upholding university standards with cooperation from students, faculty, and partners in order to promote accountability, student development, and the restoration of the individual and the community.

Office of the Dean of Students

Location: Madison Union, 300, MSC 3534

Phone: (540) 568-6468

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

Staff are committed to providing students with impartial and independent support regarding university policies, procedures and regulations. Specific types of assistance include:

- Assisting students who are considering withdrawing from the university prior to the end of the semester.
- Facilitating communications and connections with university personnel and departments.
- Notifying faculty of extended class absences when a student is incapacitated or has experienced extraordinary circumstances over the course of several 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.
- Referring students to resources to increase the likelihood of their success.
- Supporting and advising students and families in crisis and/or challenging situations.
- Consulting with faculty, staff and students regarding distressed and disruptive students to include referrals to appropriate resources.

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
- Degree audits
- Diploma issuance
- Enrollment verifications
- Graduation
- Student records
- Transfer credit evaluation
- Transcript issuance
- Veterans Affairs

Public Safety

Location: Anthony-Seeger Hall, MSC 6810

Phone: (540) 568-6913

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

The Office of Public Safety consists of law enforcement and safety services. 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.

Safety

The university safety engineer is responsible for conducting safety surveys and inspections; investigating fires, hazardous material spills and other dangerous conditions; and providing environmental and workplace safety and health awareness training.

Residence Life

Graduate Student Housing

The university does not currently offer housing for graduate students. Students interested in more information regarding university housing may contact the Office of Residence Life.

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. 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 Success Center

Location: Student Success Center, Room 3010, MSC 1012 **Phone:** (540) 568-5959

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 programs 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. These include: Card Services; Career and Academic Planning; Centennial Scholars Program; Community Service-Learning; Counseling Center; Dining Services; EPIC Center; Financial Aid and Scholarships; Information Technology Computing Support; Learning Centers; Learning Strategies Instruction; LGBTQ & ALLY Education Program; Madison Advising Peers; Office of Disability Services; Office of Student Accountability and Restorative Practices; Office of the Registrar; Orientation Office; Student Affairs Technical Services; Student Employment; Student Life & Involvement Associate Vice President; Student Success Center Operations; University Business Office; University Health Center; and Wellness, Orientation, & Multicultural Engagement Associate Vice President. The Student Success Center is a comprehensive facility unlike any other in scale and scope of programs, services and resources. All of the departments in the center collectively contribute to the success of all JMU students.

Title IX

Location: 4035 Madison Hall, MSC 7806

100 E. Grace Street

Phone: (540) 568-5219

Email: titleix@jmu.edu

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

Title IX of the Education Amendments of 1972 prohibits discrimination based on sex in educational programs and activities receiving federal funding. Title IX states, "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance." Sexual Misconduct, including Sexual Assault and Sexual Harassment, are all forms of sex-based discrimination prohibited by Title IX. JMU Policy 1340 in conjunction with Policy 1324 and Policy 1302 set out the university's commitment to providing a learning environment and workplace free from all forms of illegal sex discrimination and provides procedures for university students, employees, visitors, and affiliates to file reports and/or formal complaints.

The Title IX Coordinator is the Chief Title IX Officer, who is responsible for overseeing the university's compliance with Title IX including receiving and responding to incidents of sexual misconduct involving JMU community members. Contact information and procedures for filing reports and/or formal complaints is available on the Title IX website.

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, substance abuse prevention specialists and certified health educators 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 prior to attending classes. Therefore, it is mandatory that you complete the following steps:

Print the JMU immunization form (<http://www.jmu.edu/healthcenter/Forms/Immunization%20Form>) 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 another college or university, it will be accepted in lieu of the JMU form.

Log in to your MyJMUHealth account (<http://www.jmu.edu/healthcenter/myjmuhealth>) to upload a scanned copy of the completed and signed immunization form, as well as a copy of your health insurance card (front and back):

While in your MyJMUHealth account, complete the required TB Assessment (4 questions) and the brief Health History (4 questions) under the "forms" tab.

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

The University Health Center offers office visits at no additional cost and low-priced specialty services to students. In addition, the health center offers:

- Alcohol and other drug prevention, intervention and recovery programs and services
- Allergy Clinic
- General Medicine Clinic for routine and preventative care
- Health education programs
- International travel immunizations
- Lab services
- LGBTQ & Ally Education Program
- Patient advocate
- Peer health education organizations:
- CARE (Campus Assault ResponsE)
- REACH (Reality Educators Advocating Campus Health)
- Pharmacy dispensing (for prescriptions written by on-campus providers)
- Nutrition services
- X-ray services
- Safer Sex Supplies
- Sexual violence prevention and advocacy services
- Specialty clinics including dermatology and orthopedics
- Urgent Care Clinic
- Women's Health Clinic

University Recreation

Location: University Recreation Center, MSC 3901

Phone: (540) 568-8732

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

University Recreation (UREC) promotes and advances healthy lifestyles through participation opportunities, educational experiences and supportive services. The qualified staff is committed to excellence and attentive to the developmental needs of participants. Educational programming areas include adventure, aquatics, challenge courses, fitness, group exercise, informal recreation, intramural sports, nutrition, safety, sport clubs, wellness and youth programs.

UREC, a 278,515 square foot facility, is located on the east side of campus. UREC offers eight basketball/volleyball courts, seven racquetball/wallyball courts, four badminton/pickleball courts, two batting cages, a squash court, a table tennis area, and two indoor walking/running tracks. The Fitness Center includes 25,000 square feet of cardiovascular and weight training equipment, with areas for stretching, functional fitness and specialty training areas. There are six group exercise studios, each purposed for specific activities. The Aquatics Center offers two pools, one a 25M by 25Y main pool, and a smaller fitness activity pool that includes a jetted fitness channel, bubble bench, waterfalls, volleyball, basketball and log rolling. There is also a 32 person heated/jetted hydrotherapy pool and a dry sauna. The Adventure Center includes a climbing tower, bouldering wall, climbing shoe and adventure equipment checkout, bike rentals and repair shop, trip instruction space and an outdoor boat yard. The Wellness Center includes an athletic training room, meditation room, personal and small group training, fitness assessment and nutrition counseling spaces, as well as two massage therapy studios. There is also a demonstration kitchen and wellness education room, as well as a wet/dry classroom. There is also a 200 person capacity club room for large meetings and training events. The Equipment Center is open for checking out sporting equipment and for locker and towel services.

UREC also encompasses several satellite facilities. University Park, located at 1090 Devon Lane, includes an open event lawn, tennis, sand volleyball and basketball courts, sports turf, pavilion, disc golf course, and TEAM Challenge Course. Additional UREC satellite facilities include the UREC Turf, East Campus Fields, spaces within Godwin and Memorial Halls, and several fields and courts around campus.

A valid JACard is needed to enter UREC and University Park. Online registration is available for educational programs, group exercise classes and intramural sports. Programs requiring fees can be registered for in-person at the main UREC facility using FLEX or online at URECregister.jmu.edu using a credit card.

University Unions

Location: Madison Union 200, MSC 3501 **Phone:** (540) 568-3341 **Website:** <http://www.jmu.edu/universityunions>

The University Unions Department reflects a broad range of programs, 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:

Festival Conference and Student Center Scheduling

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.

Facilities Services (University Unions)

Location: Madison Union, MSC 3506 **Phone:** (540) 568-5555

Festival Conference and Student Center, MSC 4201

Phone: (540) 568-1715

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

Madison Union

Location: Madison Union 245, MSC 3506 **Phone:** (540) 568-6330 **Website:** <http://www.jmu.edu/madisonunion>

Madison 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.

Taylor Down Under

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 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.

University Program Board

Location: Madison Union 324, MSC 3505 **Phone:** (540) 568-6217 **Website:** <http://www.jmu.edu/upb>

Campus entertainment is scheduled through the University Program Board, a student organization advised through Student Activities, Leadership & Involvement. Concerts, films, speakers, trips and numerous other activities designed to complement the educational mission of JMU are arranged by the UPB. The board also solicits collaborative programs with other student organizations, university departments and schools. Committees for which students may volunteer include film, special events, center stage, spirit and traditions and spotlight sounds.

Withdrawal from the University

Location: Office of the Dean of Students Madison Union, 300, MSC 3534 **Phone:** (540) 568-6468 **Website:** <http://www.jmu.edu/deanofstudents>

The Office of the Dean of Students assists students who are considering withdrawing from the university after the first three weeks of the semester. The student and staff member discuss personal, financial and academic implications including pertinent policies and procedures directly involved with their withdrawal. The staff member will provide and assist the student with the proper withdrawal procedure. Details regarding the process are located at <http://www.jmu.edu/studentaffairs/departments/deanofstudents/withdrawals-loa.shtml>.

Your Right to Know

Website: <http://www.jmu.edu/pubsafety/righttoknow.shtml>

Your personal safety and the security of the campus community are of vital concern to James Madison University. Information regarding campus security and personal safety including topics such as crime prevention, sexual assault, available resources, the law enforcement authority of the James Madison University Police Department, emergency notification protocols, protocols for resident students who are reported missing, fire safety and residence hall fire statistics, and crime reporting policies can be found in the James Madison University Annual Security Report and Annual Fire Safety Report. The publications also contain reported crime statistics for the most recent three-year period that occurred on campus, in certain off campus buildings or property owned or controlled by James Madison University or affiliates, and on public property within, or immediately adjacent and accessible from, the university's Harrisonburg campus and three international campuses.

You can obtain a copy of these reports by contacting:

Department of Police and Public Safety
James Madison University
821 South Main Street – MSC 6810
Harrisonburg, VA 22807

You can request that a copy be mailed by calling (540) 568-6769/6913.

Current regulations and policies are updated annually and published in The Graduate School Policy and Procedures Manual. Upon enrollment, graduate students accept responsibility to remain current on policies and regulations set forth by their programs of study and The Graduate School. Further explanations and clarification are available from The Graduate School website.

Academic Standing and Continued Enrollment

Academic Classification

The classification of students, i.e., full time, etc. in graduate programs is often considered in determining payment deferment on undergraduate student loans, eligibility for insurance benefits, etc.

Classification/Academic Loads

Status	Credit Hours
Full Time	9 or more
Three-quarter Time	6
Half Time	5
Less than Half Time	4 or less

Continuous Enrollment

All students enrolled in graduate degree programs must enroll each regular semester for a minimum of one graduate credit hour. This registration must continue with no breaks from enrollment in the first graduate program course to graduation. This policy does not include summer sessions.

It is preferable that students enroll in courses relevant to their graduate program to facilitate timely completion. If it is not possible to do so, however, The Graduate School has established a one-credit continuous enrollment course, GRAD 597. The tuition for this course is \$50.00. No grade will be assigned for this course.

GRAD 597. Continuance. 1 credit.

To remain in good standing in their program, all graduate students must maintain continuous enrollment each semester in their program from entry until graduation. This course allows those students who are not intending to register for any other courses during the current semester to continue in their program in good standing. Course may be repeated as needed.

The following are circumstances for which GRAD 597 is not appropriate:

- During the graduation semester. A student cannot use GRAD 597 as the enrollment requirement during the semester he or she is scheduled to graduate. All graduate students must be enrolled in a course required for their program of study during the semester they are scheduled to graduate.
- If a student's graduation must be delayed while he or she completes a dissertation or thesis, the student should register for thesis or dissertation continuance rather than GRAD 597.
- If a student's graduation must be delayed because he or she received an "I" in a course, the student will not officially graduate until the course is completed. Because all course work must be completed by the final date of the student's graduation semester, a student failing to meet the deadline will not officially graduate until the following semester. The solution existing in the first example applies. Students must register for at least one hour of thesis or dissertation continuance, comprehensive continuance, reading and research, or other course option appropriate to their program of study.

Exemption from the Continuous Enrollment Requirement

It is possible to receive an exemption from the continuous enrollment requirement. There are two types of exemption from the continuous enrollment requirement:

- **Leave of Absence:** The Office of the Dean of Students may grant a temporary leave of absence to students who demonstrate sufficient cause to justify such a leave. Students who feel their circumstances justify a leave should contact the Office of the Dean of Students to discuss the possibility of a leave of absence, the consequences of interrupting their program of study and the conditions that will need to be satisfied to return to the university. The Office of the Dean of Students is responsible for granting these leaves. The Office of the Dean of Students works with the graduate program director and The Graduate School when determining if and when a student on leave can return to the university. Whenever possible, students should discuss with their adviser and/or program director the impact a leave of absence would have on their ability to eventually complete their program of study. In some programs, it may be difficult or impossible for a student to complete their program of study when they do not continue with their cohort.
- **Planned Leave of Absence:** Occasionally, students may not be expected to enroll in courses every semester because of the design of their academic program. Examples include programs designed for working professionals that may only offer classes during summer sessions or some programs offered online. The Dean of The Graduate School approves the offering of courses in these special formats, and students enrolled in these special format programs may be automatically exempt from the continuous enrollment requirement. Students enrolled in these special format programs must complete all degree requirements within the time limits established by The Graduate School.

Except for extenuating circumstances requiring approval from the Dean of The Graduate School, time spent in on-leave status will be included in all time limits pertaining to the student's degree program.

Students in on-leave status may not:

- use any university facilities
- make demands upon faculty time
- receive a fellowship or financial aid

A graduate student who takes an unapproved break in enrollment by failing to maintain continuous enrollment or by failing to obtain a Leave of Absence will relinquish his/her graduate standing in the university. Students who wish to be reinstated must file an Application for Graduate Admission and pay the application fee.

Course Completion Deadline

All course work must be completed by the final date of the student's final semester. Students failing to meet the deadline will have their names removed from the current graduation list and they must reapply to graduate. Consult the calendar online at <http://www.jmu.edu/registrar> or this catalog for exact dates.

Registration

Semester course listings are available on the university's internet-accessible information system at <https://mymadison.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.

Course work required for completion of degree programs is listed in this catalog under the title "Degree Requirements." Students pursuing degrees are expected to work with their adviser and program director to develop a plan of study that is consistent with the degree requirements for their program and the student's professional interests. Note that some courses are intended to be taken in a certain sequence, and many courses are not offered every semester, so students should seek advice as they plan their academic program. Students are responsible for selecting and registering for courses that will help them make progress toward the completion of their degrees. If a student wishes to take a course that is not listed as a degree requirement in the catalog, formal permission is required for this course to count as part of their program of study or substitute for another requirement.

Students may register for additional courses that are not required for completion of their degree. Permission of the instructor or program offering the course may be required to enroll in some of these courses. These additional courses may include undergraduate courses and/or graduate courses offered for students in other programs or departments. However, enrollment in these extra courses will not contribute to the completion of a graduate program unless formal permission has been granted for a particular course to count in this way. Note that undergraduate courses can be required prerequisites, but they cannot count toward a graduate degree and graduate students may not be able to receive financial aid for the completion of undergraduate courses. Graduate assistantships will not cover tuition for undergraduate courses.

Courses completed prior to enrollment in a particular degree program will not count toward that degree program until the student is admitted to that program and unless the relevant program director approves the transfer of prior course work, including courses completed at JMU. Under no circumstances will more than one-half of the total graduate credits required for completion of a program be considered for transfer/inclusion in the student's program of study. This includes any hours taken at JMU prior to acceptance. Students may not transfer course work to their current degree program that was previously used to earn an awarded degree or certificate program.

Advising

Faculty Advisers

All students admitted into The Graduate School are assigned faculty advisers. Graduate program directors or designated members of the graduate faculty serve as faculty advisers. After admission, students must meet with their advisers to select initial course work and plan their programs of study. Programs of study should be developed prior to initial registration.

Catalog of Record

Students are generally subject to the curricular and graduation requirements contained in the graduate catalog in effect upon or subsequent to their enrollment at JMU, with approval of the students' program and The Graduate School. At the discretion of their academic unit heads, students who leave and re-enter the university after an absence of a semester or more will be subject to the catalog in effect at the time of their re-entry or the catalog used by the majority of students with whom they will graduate.

Aging Credit

Graduate students are expected to complete all program and degree requirements within six years (for master's degree) or eight years (for doctoral degree) of their original entry date to JMU or previous higher educational institution(s). Additional standards may apply in programs leading to licensure or certification. Students may submit a written petition through their adviser, graduate program director and academic unit head to the dean of The Graduate School to receive extensions of time in the event of extenuating circumstances. Such requests must be received at least one month prior to the end of the student's original six- or eight-year time limit.

Changes in Requirements

James Madison University is a progressive educational institution, and its offerings and requirements in the graduate 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.

Changes to Policies and Programs of The Graduate School

It is the responsibility of each student to become and remain aware of all applicable requirements and provisions that may apply to the student.

It is the prerogative of each academic unit to make changes in programs at any time prior to graduation. Students typically complete the program requirements as described in the catalog of the year in which they entered their program. Students who do not conform to their catalog must complete a program of study, which is developed and approved by their advisers and submitted to The Graduate School.

Exceptions to Regulations

Exceptions to any of the published rules and regulations cited within the Graduate Catalog must be requested by petition to The Graduate School. Such petitions must be submitted in writing by the student's adviser or graduate program director to the dean of The Graduate School and must detail the regulation and justify completely the exception being requested.

Comprehensive Assessment Procedure

A formal assessment of mastery designed to appraise the student's competence is required of each JMU student in order to complete his or her program of graduate study. Although the formal assessment typically takes the form of a comprehensive exam, other formal assessment formats may be acceptable as determined by the graduate program.

The format and timing of this assessment is at the discretion of the graduate program, provided it fairly and adequately documents the knowledge and skills the student has acquired. The nature of the comprehensive assessment should accurately reflect the content of the student's academic program. The assessment should require the integration and synthesis of what has been learned by the student. The student must demonstrate a breadth of knowledge in the discipline and depth in specific content areas to be determined by the graduate program faculty.

Comprehensive Assessment Committees

Each graduate program must have a comprehensive assessment committee for the program and/or for the individual student. Individual student comprehensive committees are selected by the student in consultation with and subsequently approved by the graduate program director and/or program adviser. Each comprehensive assessment committee must consist of at least three JMU graduate faculty members with the background and interest necessary to evaluate the mastery of the student. At least two members must be from the student's graduate program.

Non-graduate faculty members of the comprehensive assessment committee, which may include persons external to the university, must be approved by The Graduate School. Such members shall make up no more than one-third of the total committee membership. Graduate instructors may also be appointed to committees with the approval of The Graduate School when their expertise clearly qualifies them; however, their appointment must be in addition to the required number of graduate faculty members.

Graduate students may not serve on the comprehensive assessment committees. Only a graduate faculty member from the student's graduate program may chair a comprehensive assessment committee.

Comprehensive Assessment Procedure Failure

In the event a student fails the comprehensive evaluation, the student may request a re-examination. Unless there are extenuating circumstances, the re-examination must occur within six months of the date of failure. Only one re-examination will be allowed. Cases involving extenuating circumstances must be raised or supported by the graduate program faculty and presented in writing to the dean of the relevant college and the dean of The Graduate School for approval. If a student fails the second comprehensive assessment, his or her graduate program will be terminated.

Comprehensive Assessment Procedure Continuance

Students completing all degree requirements except the comprehensive assessment are required to enroll each semester until they have passed the comprehensive assessment. Students must register for comprehensive continuance credit hours during those semesters in which they are engaged in preparation for the comprehensive assessment. NOTE: The continuous enrollment course GRAD 597 cannot be used as a comprehensive continuance course. Credit hours for comprehensive continuance do not count toward graduate program requirements.

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 or 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 or 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 or 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 or 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 (such as an attorney, auditor or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or 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, telephone numbers, addresses, place of birth, 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, fraternity and/or sorority and educational societies.

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

<http://www.ed.gov/policy/gen/reg/ferpa/index.html>

For more detailed information, see Manual of Policies and Procedures, Policy 2112, Student Privacy.

Course Levels

Course Numbering System

Courses numbered 500 through 900 are graduate courses and may be applied to a graduate program. Non-degree seeking students who have at least a bachelor's degree may enroll in graduate-level courses with prior written approval from the instructor.

Some programs use dual-numbered courses that allow both graduate and undergraduate students. For example, such courses may offer content concurrently on the 400 and 500 levels. In such instances, higher quality and/or additional work is required of the students enrolled at the graduate level in these courses. The additional demands required of graduate students in these dual-numbered courses are evident in the course syllabus and catalog description.

Course Level Requirements

All credits contained in the student's program leading to an advanced degree at JMU must be in courses designated for graduate students. At least one-half of the courses in the student's required plan of study must be at the 600 level or above. Only six hours of 501 workshop courses may be applied to a graduate degree program. Students should refer to their academic program for specific requirements.

Dissertation, Thesis and Ed.S. Research Project

Dissertation, Thesis and Ed. S. Research

A dissertation is required of all candidates for the Doctor of Audiology, Doctor of Psychology and Doctor of Philosophy degrees. A Doctor of Musical Arts Lecture Recital and Doctor of Musical Arts Document are required of all candidates for the Doctor of Musical Arts degree.

A thesis is required in several master's and Ed.S. programs. In other master's degree programs, a research project and the writing of a thesis is an option which may be elected by the student in consultation with and subsequently approved by his or her adviser. Graduate students are required to register for the minimum hours of thesis or dissertation credit required in their programs. Students must register for thesis or dissertation credit hours during those semesters in which they are engaged in the research or in the writing of the thesis or dissertation. NOTE: The continuous enrollment course GRAD 597 cannot be used as a thesis or dissertation continuance course.

Dissertation, Thesis and E.S. Research Project Requirements

The general requirements for the preparation of a thesis or dissertation or Ed.S. project pertain primarily to formatting and submission. These requirements provide a degree of uniformity and ensure that each thesis or dissertation is in a form suitable for archiving, is fully legible and can be preserved.

Students who submit a thesis or dissertation or Ed.S. project in partial fulfillment of the requirement for a graduate degree at JMU should consult the JMU Graduate School Thesis and Dissertation Manual for detailed guidelines to submission. A general overview includes the following steps. Students should:

- Consult their program requirements for guidelines on registering for their thesis and dissertation.
- Select a graduate faculty member as committee chair.
- Identify the remaining members of the committee with guidance from the committee chair.
- Submit the Committee Approval form to The Graduate School.
- Begin the project using the style guide recommended by their program.
- Schedule an appointment with The Graduate School to review the format of their project.
- Make necessary formatting changes.

- Obtain approval signatures.
- Submit online a final copy of their work and turn in approval sheets to The Graduate School.
- Submit a copy online to the library.
- Titles of dissertations will be printed in the graduation program if the information is received by the appropriate deadline. In addition, an electronic copy of each student's thesis or dissertation will be cataloged in JMU's Scholarly Commons.

Dissertation, Thesis and Ed.S. Project Committees

Students pursuing degrees requiring completion of a thesis or dissertation or Ed.S. project must have a thesis, research project or dissertation committee to oversee progress toward the degree. Students should select a graduate faculty member from their graduate program to act as the director of the committee and select the remaining committee members with the guidance of their director.

The following govern the selection of committee members:

- Each committee must consist of at least three approved members of the JMU graduate faculty. Full-time graduate faculty, graduate instructors, emeritus graduate faculty and adjunct graduate faculty may be selected to serve as members of the thesis, research project or dissertation committee. Only full-time graduate faculty participating in the student's program may direct or co-direct the committee.
- At least two of the three committee members must routinely participate in the student's graduate program. The dean of The Graduate School must approve non-graduate faculty members for thesis, research project or dissertation committees.
- Non-graduate faculty members shall make up no less than one-half of the total committee membership and may include persons external to the university.
- The Committee Approval form must be completed and submitted to The Graduate School no later than the second week of the semester in which the student registers for dissertation or thesis.

Dissertation, Thesis and Ed.S. Research Project Continuance

The continuous enrollment course GRAD 597 cannot be used as a thesis, dissertation or research project continuance course.

Dissertation and Thesis Grading

Faculty will post a grade of "S" (Satisfactory) or "U" (Unsatisfactory) for a thesis, dissertation or research project for each semester in which the student is enrolled. Faculty and students may view this grade on MyMadison.

Doctoral Candidacy Request

Doctoral students are admitted into candidacy for their graduate degree once they have completed all required course work, passed their comprehensive examination and completed all conditions of the original admission into the individual's degree program. Once students have reached this point, the program director informs the dean of The Graduate School electronically or by letter. This confirmation of successful completion of the comprehensive examination is placed in the student's file, and he or she is considered a candidate for the doctoral degree. The student is then permitted to advance to completion of his or her dissertation and graduation.

General Review Process

Evaluation of a graduate student's progress is primarily dependent on the judgments of appropriate faculty members of the student's graduate program. The university, through The Graduate School, can define minimal entrance standards and prescribe general rules governing eligibility for continuation. However, the crucial agency in graduate student evaluation is the graduate program in which the student's work is focused. Principal evaluators must be faculty members of the student's graduate program.

It is assumed that disputes over unsatisfactory progress will be informally discussed and reconciled at the program or academic unit level. Discussions of this type will commonly occur among the student, major professor and other faculty members in the graduate program.

Grade Review Procedures

Grade Change Review Procedure: If a student disputes a grade for any other reason than error in grade assignment or calculation, the student can initiate a formal grade review process. The grade review process described below can also be initiated to dispute a failing assessment of any comprehensive activity, including but not limited to comprehensive examinations and thesis/dissertation defenses. To activate the grade review process, the student must follow these steps:

The student submits a Grade Review Form to the appropriate professor by Monday of the third full week of classes in the regular semester that follows the semester for which the contested grade was given. In the case of a comprehensive assessment review, the Grade Review Form is submitted to all members of the comprehensive exam committee. The student must attach a written explanation of reasons for the appeal, 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 full week of classes in the subsequent fall semester.

The student meets with the course instructor by Friday of the third full week of classes to attempt to resolve the concern. In the case of a comprehensive assessment review, the student may pursue a resolution entirely through email correspondence or may elect to request a face-to-face meeting with the committee chair.

If the student and the course instructor (or committee chair) reach an agreement that the grade should be changed, the course instructor or committee chair changes the grade by submitting a Grade Change form to the appropriate academic unit head or graduate program director for that individual's signature. A copy of this signed Grade Change form will be forwarded to The Graduate School. For graduate students whose grade of "C," "U" or "F" is to be changed, notice of the grade change must be sent to The Graduate School before that change occurs.

If no resolution is reached, the instructor (or committee chair) signs the Grade Review form and records a written response on the reverse side of the form. The instructor (or committee chair) returns the original copy of this form to the student, retains a copy of the form for his or her personal records and forwards a copy to the relevant academic unit head or graduate program director by Friday of the fourth full week of classes.

The student must contact the relevant academic unit head or graduate program director by the Friday of the fifth full week of classes in order to request review of statement and response. In situations in which the academic unit head or graduate program director is a member of the comprehensive assessment review committee, an associate dean in the college will be identified by the college dean to serve in the appropriate role for this process.

The academic unit head or graduate director meets with the student and confers with the relevant course instructor (or committee chair).

The academic unit head or graduate program director signs the Grade Review form and records a written response on the reverse side of the form by Friday of the seventh full week of classes. The student receives the original copy of this form. The relevant course instructor 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 course instructor or committee chair submits a Grade Change form to the academic unit head or graduate program director and the appropriate individual signs the form. A copy of the form will be forwarded to The Graduate School. Notice of the grade change must also be sent to The Graduate School before the grade change occurs for graduate students who have a grade of "C," "U" or "F" changed to some other grade.

After the review process outlined above has been completed, a student can also request that the form, documentation and responses be reviewed by the dean of the college in which the course was taught, or the comprehensive assessment was administered. The college dean's responsibility is only 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.

To enter this phase of the process, a student must follow this procedure:

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

- The dean of the relevant college reviews the process to be sure the student and the instructor (committee) have had a fair hearing.
- If the relevant college dean believes that due process was not followed during the review process, he or she consults with the relevant professor and academic unit head or graduate director to resolve the dispute.
- The dean sends a written response to all involved parties by Friday of the 10th full 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 and sends a copy to the relevant academic unit head or graduate director and the relevant instructor or committee chair.
- If it is agreed that the student's grade should be changed, the relevant course instructor or committee chair submits a Grade Change form to the academic unit head or graduate director. The recipient then signs the form and forwards a copy to the dean. Notice of the grade change must also be sent to The Graduate School before the grade change occurs for graduate students who have a grade of "C," "U" or "F" changed to some other grade.

There is no further review beyond the dean of the relevant college. 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.

Grading System

Letter Grade	Description	Numerical Value
A	Excellent	4.0
A-		3.7
B+	Very Good	3.3
B	Good	3.0
B-		2.7
C	Poor	2.0
F	Failure	0.0
I	Incomplete	
W	Withdrawal	
WP	Withdrawal while Passing	
WF	Withdrawal while Failing	
S/U	Satisfactory/Unsatisfactory (Thesis/dissertation and selected other courses. See course descriptions.)	
NC	No credit	

The +/- grading scale is optional for faculty; the course grading system must be stated in the course syllabus.

- A grade point average is calculated by dividing the accumulated number of grade points earned by the accumulated number of credit hours attempted. All graduate credits attempted and all graduate grades earned, whether passing or failing, will be used to calculate a student's grade point average.
- The grade point average appears on the student's transcript.
- Students must take all courses on a letter grade ("A-F") or satisfactory/unsatisfactory (S/U) basis, based on how the particular course was approved. Students do not have flexibility in choosing a grading option.
- A grade of "W" will be assigned to students who withdraw from a course after the add/drop deadline but before the end of the course adjustment deadline.
- A grade of "WP" or "WF" (according to the status of the student at the time of withdrawal) will be assigned to students who withdraw after the course adjustment deadline at the discretion of the instructor. The "WP" or "WF" will be recorded and remain on the student's transcript. Only the instructor can assign a "WP" or "WF."
- If students have completed the maximum number of hours allowed by their program for thesis, dissertation or research project courses but have not completed the work, they will register for thesis, dissertation or research project continuance each semester while completing their research or writing.
- A grade of "NC" (no credit) will be automatically entered for continuance hours.
- Students should keep in mind that earning a "B-" may bring the GPA below 3.0 and prevent students from graduating.
- In order to graduate, students must satisfy grade requirements specified by their individual academic program.

Auditing Graduate Courses

Graduate students may enroll in graduate courses using the "audit" option for elective courses only. These courses will not count as part of the student's program of study. Students must initially register for the course using the "audit" option. Under no circumstances may a course credit option be changed from "audit" to "credit" or "credit" to "audit." Students are required to pay for courses taken as "audit." Audit courses cannot be paid for using any university sources of funding, e.g., assistantship funding.

Credit By Examination

Credit by examination is an option that programs can include in their policies. Each program will use its own discretion in developing the form of the examination and in determining the procedure to be followed. A maximum of nine credit hours can be earned through credit by examination or transferred from institutions other than JMU, with no more than nine credit hours earned by a combination of exam or transfer.

Permission to take an examination for credit must be obtained from the head of an academic unit in which credit is sought. The cost for the exam will be \$50 per credit hour attempted. Successfully earning credit by examination will result in a grade of "CR," with credit given, on the transcript.

Incomplete Grades

"I" is used to indicate incomplete work in a course. Courses in which a student received a grade of "I" must be completed by the end of the next regular semester or the grade is reported permanently as an "F" or a "U" (depending on the grading scale used for the course). An extension will be granted upon request by the faculty member for only one additional semester.

Students should consult academic unit guidelines regarding such courses. It is the responsibility of the student to ensure grade changes are reported to the Office of the Registrar by the deadline. See the university calendar in this catalog for the date by which grade changes must be submitted.

All course work must be completed by the final date of the student's final semester. Students failing to meet the deadline will not graduate and will have their degrees dated the following semester. Consult the university calendar online or in the front of this catalog for dates.

Satisfactory Progress

If, at any time, a graduate student fails to make satisfactory progress toward the degree, the student may be denied permission to continue in the program. Such a decision may be based on grades, grade point average, comprehensive examination, thesis or dissertation performance, or other factors relevant to the student's academic program. Recommendations

regarding satisfactory progress may be made by the student's adviser, graduate program director, academic unit head or The Graduate School. Recommendations are referred to The Graduate School for final action.

Academic Warning

A graduate student will receive a notice of academic warning upon receiving a grade of "C" in any two graduate courses or if the student's grade point average falls below 3.0. This academic warning will be noted on the student's transcript. All credits attempted and all grades earned, whether passing or failing, will be used to calculate a student's grade point average.

Academic Dismissal

A student will be dismissed from the degree program if the student receives an "F" or "U" in any graduate course or the student receives a total of three "C" grades. A student dismissed from the degree program may not enroll in any graduate-level courses for a period of one year. Students who want to return to the university must reapply and be re-accepted in the usual manner.

Graduation

The office of the dean of The Graduate School, assisted by the graduate faculty, have responsibility for final approval of graduate degrees to be awarded. It is the responsibility of each student to ensure that courses selected are acceptable to the program being pursued. A student cannot graduate with a GPA below 3.0. Students should keep in mind that earning a "B-" grade may bring the GPA below 3.0 and prevent the student from graduating.

Graduate Degree Completion Requirements

- Complete all courses required for the intended degree. At least one-half of the courses in the student's required plan of study must be at the 600 level or above.
- Be continuously enrolled in the graduate program from admission to graduation (unless specifically exempt).
- Have satisfied any conditions of his or her admission, such as provisional or conditional admission.
- Complete the graduate program with an appropriate GPA. The standard for graduation is a 3.0 or higher GPA.
- Be enrolled in a course other than GRAD 597 during the semester in which he or she plans to graduate.
- Complete all requirements of the graduate program and The Graduate School within six calendar years (master's and education specialist degrees) or eight years (doctoral degrees).
- Successfully achieve doctoral candidacy (doctoral students only).
- Successfully complete a comprehensive assessment or equivalent as determined by the individual graduate program. The graduate program must notify The Graduate School that the student has successfully completed the comprehensive assessment procedure.
- Submit a thesis, dissertation or research project, if required by the academic program, to The Graduate School that meets the format requirements set forth in The Graduate School Thesis and Dissertation Manual.
- Complete the minimum period of residency established by his or her program. While the traditional period of required residency is optimal, the technological revolution that facilitates distance learning of all varieties may not allow for the traditional approach to residency.

In addition to meeting the general completion requirements set forth by The Graduate School, each student must meet the graduation requirements of the individual graduate program.

Application for a Graduate Degree

Students must submit an application for graduation, available from The Graduate School website. Students are also responsible for consulting their advisers or The Graduate School website regarding deadlines for graduation.

The Application for Graduate Degree form must be approved by the student's adviser and the academic unit head or graduate program director. Students are responsible for obtaining all necessary signatures to complete the Application for Graduate Degree form. Students should complete all requirements of their catalog of record or complete a program of study. Students must complete all the conditions of the original admission in their degree program, e.g., conditional admission, at least one semester before they are scheduled to graduate before they can be permitted to graduate.

Only six credit hours of 501 workshop courses approved for inclusion in a graduate program may be applied toward a degree. If students plan to use transfer credits to fulfill degree requirements, these credits, along with official transcripts showing the credits and the transfer of credit form, must appear on the Application for a Graduate Degree form and be forwarded to The Graduate School.

Students completing a dissertation must submit the dissertation title to The Graduate School by the deadline set by The Graduate School for this information to be included in the commencement program.

Requirements for Graduation Semester Registration

All graduate students are required to be registered in a course other than GRAD 597 during the semester in which they receive their degree.

Attendance at Commencement

Students are expected to attend graduation exercises. A student unable to be present for the graduation exercises must notify The Graduate School no later than 15 working days before commencement.

Grievance Procedure for Students

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

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.

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 or she deems appropriate on the grievance.

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.

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.

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 Code Tutorial video, test information and test are available at <http://www.jmu.edu/honorcode/test.shtml>.

The Honor Council encourages all members of the JMU community to familiarize themselves with the Honor Code and Honor System procedures. The Honor Council office is located in Johnston Hall.

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.

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.

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

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.

Graduate Students

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).

Deposits

For new students enrolling in the physician assistant studies program (M.P.A.S.), political science with a concentration in European Union policy studies (M.A.), or Spanish Language and Culture for Educators (M.Ed.), 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.

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.

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.

Deferral of Enrollment

If a graduate student has been admitted to James Madison University and is called to active military duty before enrolling, the student may request a deferral of admission using the process below.

- The student must submit a request (i.e., letter or email) to the Graduate Program Director requesting a deferment. In the communication, the student should provide the reason for the request (call to active duty) and indicate the term he/she wishes to re-enroll (the term can be changed if needed).
- The Graduate Program Director approves the deferment and informs the Director of Graduate Admissions that the deferment has been approved.
- The Director of Graduate Admissions notifies the student that the request has been approved and informs the student to notify The Graduate School and their Graduate Program Director at least 30 days prior to the first class day of the return semester.
- If the student's discharge from the service is delayed, the student contacts the Director of Graduate Admissions and requests an extension of his/her deferment. The Director of Graduate Admissions will approve the delay and inform the Graduate Program Director.

Leave of Absence

A military leave of absence is granted to graduate students deployed for active military service. The graduate program director of the program in which the student is enrolled must request a military leave of absence for a student in a graduate program. The request must be approved by the dean of The Graduate School. Continuous enrollment is granted for a specified time period that may not exceed four semesters total, excluding summer session. Any extension of the approved continuous enrollment period must be requested by the student 30 days prior to the deadline and approved by the dean of The Graduate School.

When a student on leave plans to resume graduate study, he/she must inform the graduate program director and The Graduate School at least 30 days prior to the first class day of the return semester. All registration holds must be cleared before the student will be eligible to register.

In the case of a military leave of absence, the time clock related to the time limit for the completion of the degree (i.e., master's and educational specialist students must complete all degree requirements within six years; doctoral students must complete all degree requirements within eight years) will be stopped at the semester in which the leave begins. The time clock will resume upon the student's return to the program. While all academic credit, including transfer credits taken before enrollment in the graduate program, will remain on the graduate transcript, courses originally approved to be counted toward the degree program which now fall outside of the original time limit must be reviewed and approved by the program director in terms of content relevancy. In some cases, additional course work may be warranted due to outdated information.

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 G.I. Bill – Active Duty Program) or chapter 33 (Post-9/11 G.I. 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) and enrolls in the school within three years of discharge from a period of active duty service of 90 days or more.

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) and enrolls in the school within three years of the transferor's discharge from a period of active duty service of 90 days or more.

Anyone described above while he or she remains continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same institution. The person so described must have enrolled in the institution prior to the expiration of the three-year period following discharge or release as described above and must be using educational benefits under either chapter 30, chapter 33, or chapter 31 of title 38, United States Code.

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) and the transferor is a member of the uniformed service who is serving on active duty.

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, Vocational Rehabilitation 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.

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.

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.

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.

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.

Misconduct in Research and Other Scholarly Work

Policy 2205, Misconduct in Research and Other Scholarly Work 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.

Transfer Credit

Students who wish to receive graduate credit for courses taken prior to entering a JMU graduate program must submit requests to their adviser during the first semester of enrollment. The Approval of Transfer Credit form is available online.

A grade of "B" or better must be earned in courses requested for transfer credit. Courses taken for pass/fail or satisfactory/unsatisfactory grades will not be accepted for transfer graduate credit. An official transcript showing the credits approved for transfer must be forwarded to The Graduate School.

Students may not transfer in more than nine credit hours from institutions other than JMU. Under no circumstances will more than one-half of the total graduate credits required for completion of a program be considered for transfer/inclusion in the student's program of study. This includes any hours taken at JMU prior to acceptance. In the case of variable credit programs, the one-half maximum transfer hours allowed will be calculated based on the minimum number of hours required for the degree.

Transfer credit applications must be approved by the student's adviser, academic unit head and the dean of The Graduate School. Exceptions to the policy may be considered on a case-by-case basis.

Course work taken while an undergraduate financial aid recipient at JMU will not be transferred to the graduate transcript if fewer than 12 undergraduate credits remain on the transcript during the term in which the course(s) requested for transfer was taken.

It is the student's responsibility to furnish evidence that any course presented for transfer of credit is applicable to a comparable degree at the accredited institution where the course was taken. If the necessary information is not on the official transcript, it must be obtained in writing from the appropriate dean of the institution where the course work was earned. In all cases, courses considered for transfer of credit must be applicable to a comparable degree at JMU. Courses that are not intended by the institution offering them to be part of a degree program, such as extension and in-service courses, are not acceptable for transfer to JMU.

Credits earned to complete a previous graduate degree may not be applied to a second graduate program at JMU at the same degree level. However, previously earned graduate credit earned as a part of a master's degree program from an accredited institution may be counted toward the degree requirements of a higher-level degree, such as the Master of Fine Arts, Educational Specialist and doctoral degrees if the earned master's degree is not a requirement of admission. When a master's degree is required for admission to a degree program, credits from the original degree program may not be used to meet the degree requirements of the new program. Academic work, including transfer credit, taken more than six years before the master's degree award date or eight years before the doctoral degree award date may not be used to satisfy the degree requirements. No transfer credit will be approved while a student is in provisional status.

Students must familiarize themselves with their specific program requirements as discussed in the academic sections of this catalog. Individual programs will have detailed information relative to the acceptance of credit hours toward their degrees.

Permission to Take a Course at Another University After Enrollment

Students enrolled in a graduate program may take graduate courses at another accredited institution. While prior approval is not required, students should secure permission from their adviser, academic unit head, graduate director and The Graduate School to ensure that the course will transfer to JMU.

It is the student's responsibility to request transfer credit for such courses upon completion and to have official transcripts submitted to The Graduate School office. Transfer credit forms are available at The Graduate School office or online.

Students who take their last courses to fulfill their programs of study at institutions other than JMU cannot graduate during that semester unless prior approval is obtained through the dean of The Graduate School. Students must be enrolled at JMU during the semester they graduate.

Withdrawal

Withdrawal from Courses

A student may terminate enrollment in a course by withdrawing from the course after the drop 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.

In extraordinary situations, a student who becomes unable to complete some course requirements after the course adjustment deadline (typically during the thirteenth week of a regular semester class – see term calendar for exact date) may request a grade of "WP" (Withdrawn Passing) or "WF" (Withdrawn Failing) from the instructor. 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. If appropriate, 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 Dean of Students 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.

Withdrawal from the University or a Graduate Program

The Office of the Dean of Students must approve such withdrawal requests, set the official withdrawal date and notify other university offices of the withdrawal. Strict compliance with this requirement is mandatory. Students who withdraw without receiving official approval will receive a grade of "F" for all courses in which they are enrolled.

A student who voluntarily withdraws from his or her graduate program without receiving official approval will receive a grade of "F" for all courses in which he or she is enrolled. A student voluntarily withdrawing with official approval will receive a grade of "W," "WP" or "WF" in all courses. A grade of "W" will be assigned to students who withdraw from a course after the add/drop deadline but before the end of the course adjustment deadline. A grade of "WP" or "WF" (according to the status of the student at the time of withdrawal) will be assigned to students who withdraw after the course adjustment deadline at the discretion of the instructor.

It may also be necessary for a graduate student to withdraw due to extenuating circumstances. Withdrawal for extenuating circumstances must be approved by the student's graduate director and the dean of The Graduate School. A student who withdraws because of extenuating circumstances will also receive a grade of "W," "WP" or "WF" in all courses.

Students who withdraw from their graduate program will be responsible for tuition as determined by the Office of the Registrar and may be subject to a change in their financial aid status. For more information, see the section of the catalog on "Withdrawal Refunds."

Non-degree seeking students enrolled in an on- or off-campus course must also withdraw from the university by securing a Withdrawal Application form from the Office of the Dean of Students. This form must be completed and returned to the Office of the Dean of Students, which will process the official withdrawal. Any adjustment in charges will be calculated from the last date of attendance.

No adjustment in charges will be made unless the withdrawal form is received by the Office of the Dean of Students within 30 days after the student leaves the campus or does not attend classes.

Withdrawal from a graduate program is the equivalent of withdrawal from the university.

Your Right To Know

Your personal safety and the security of the campus community are of vital concern to James Madison University. Information regarding campus security and personal safety, including topics such as crime prevention, sexual assault, available resources, the law enforcement authority of the James Madison University Police Department, emergency notification protocols, protocols for resident students who are reported missing, fire safety and residence hall fire statistics, and crime reporting policies can be found in the James Madison University *Annual Security Report* and *Annual Fire Safety Report*. The publications also contain reported crime statistics for the most recent three-year period that occurred on campus, in certain off-campus buildings or property owned or controlled by James Madison University or affiliates, and on public property within, or immediately adjacent to and accessible from, the university's Harrisonburg campus and three international campuses.

The reports are available from the JMU Department of Police and Public Safety website at <http://www.jmu.edu/publicsafety/clerycompliance/righttoknow.shtml>.

You can obtain a copy of these reports by contacting:

Department of Police and Public Safety

James Madison University
821 South Main Street
MSC 6810
Harrisonburg VA 22807

You can request that a copy be mailed to you by calling

(540) 568-6769/6913

Assessment and Measurement, Ph.D.

Graduate Program Director: Dr. Deborah Bandalos

Phone: (540) 568-7132

Website: <http://www.psyc.jmu.edu/assessment/>

Application Date

Application review opens October 15 and the target date is January 10. All application materials must be received by January 10 to be guaranteed consideration.

Students applying to the assessment and measurement Ph.D. program should indicate that they will begin the program in summer semester. Applicants who are unable to begin during the summer semester should contact the program director to make alternate arrangements. However, such applicants should still indicate a summer starting date.

Admission Requirements

Completion of an advanced degree (M.A./M.S. or Ed.S.) in psychology, education, statistics or a related field.

General GRE scores (verbal, quantitative and analytic writing).

Statement of interest in the program and professional goals. In this statement, applicants should discuss why they are interested in the field of Assessment and Measurement, and in our program in particular, and the type(s) of career(s) they would like to pursue in the future. Applicants may also indicate their research interests and preferences for an advisor.

- Three letters of recommendation from professionals familiar with the applicant's academic work and relevant professional experiences.
- Transcripts from all undergraduate and graduate programs attended.
- A current professional vita or resume.
- Representative samples of professional writing.

Graduate Psychology Mission

Our mission is to transform students into outstanding practitioners and scholars of psychology and counseling. We work to create a community that celebrates diversity and creativity, and that values learning, scholarship and service to others.

Mission

The vision of the Doctor of Philosophy program in assessment and measurement at JMU is to establish and maintain a national reputation as a valuable resource in educational outcomes assessment and in applied and theoretical measurement. As such, the program will help meet the growing demand for assessment and measurement professionals in a wide variety of applied settings.

To attain this vision, the mission of the doctoral program is to:

- Provide training for its graduate students that combines rigorous, theory-based course work in assessment and measurement with extensive real-world assessment experiences. This training will prepare students to address the increasing external pressures for accurate data in a wide variety of settings including higher education, K-12 education, non-profit and governmental organizations.
- Conduct high-quality scholarship that will significantly advance knowledge in the fields of assessment, measurement, and quantitative methods and promote more effective practice in these areas.
- Provide, both for JMU and outside constituencies, valuable service activities that promote effective assessment practice and contribute to the professional well-being of the fields of assessment, measurement and quantitative methods.

The focus of the assessment training in the Ph.D. program is on the design of program assessment strategies, empirical investigation of new measurement and assessment methods, identification of appropriate existing and/or construction of new assessment measures/methods, quantitative analysis of aggregate data, appropriate use of assessment results, and effective communication of results to a variety of audiences. Moreover, with the extensive background in measurement theory and quantitative methods provided, the graduates of this Ph.D. program are trained as experts in these areas, enabling them to enter the field equipped with a knowledge base that extends far beyond the pragmatic aspects of implementing assessment strategies. Although the program focuses on applications of assessment, measurement, and quantitative methodology in higher education, students can apply the skills and knowledge gained in the program to areas such as K-12 education, industry, and government. Students are not trained to perform psychological assessment of individuals for clinical diagnostic or therapeutic purposes. Instead, training revolves around the design and improvement of methods to measure program effectiveness, the development and psychometric evaluation of measurement instruments, and effective applications of quantitative methods.

The Ph.D. program in assessment and measurement adheres to a practitioner-scientist, applied model of graduate training, built on a solid theoretical base in scientific psychology. The program integrates pedagogical foundations of psychology, measurement, assessment, quantitative methods and applied experience. The training model is further designed to capitalize on the previous educational and professional experiences and training of incoming students to expand, strengthen and supplement these skills.

Curriculum

The program for a given student will consist of the 57 required hours plus any additional course work that the program faculty deems is needed to fulfill the foundational course work expectations.

Assessment and Measurement Doctoral Program Degree Requirements

Students must complete graduate course work in the following areas:

- Foundational graduate course work in psychology, research and inferential statistics, including:
- Measurement theory
- Introductory and intermediate statistics
- Course work in at least two of the following areas: social psychology, cognitive psychology or student development

Required Courses

PSYC 602. Psychological Research Methods 3.00

PSYC 604. Computer-Assisted Data Management and Analysis 3.00

PSYC 608. Multivariate Statistical Methods in Psychology 3.00

PSYC 770. Assessment and Public Policy 3.00

PSYC 803. Quasi-Experimental Research Designs and Propensity Score Analysis 3.00

PSYC 812. Assessment Methods and Instrument Design 3.00

PSYC 814. Performance Assessment 3.00

PSYC 816. Classical Test Theory and Generalizability Theory 3.00

PSYC 825. Doctoral Seminar in Professional Psychology 1.00 - 3.00 (2 occasions; 2 credit hours per offering)

PSYC 830. Structural Equation Modeling 3.00

PSYC 832. Item Response Theory 3.00

PSYC 836. Hierarchical Linear Models 3.00

PSYC 855. Assessment Consultation and Practice 3.00

Approved Electives 9 Credit Hours

PSYC 602. Psychological Research Methods 3.00

PSYC 604. Computer-Assisted Data Management and Analysis 3.00

PSYC 608. Multivariate Statistical Methods in Psychology 3.00

PSYC 770. Assessment and Public Policy 3.00
PSYC 803. Quasi-Experimental Research Designs and Propensity Score Analysis 3.00
PSYC 812. Assessment Methods and Instrument Design 3.00
PSYC 814. Performance Assessment 3.00
PSYC 816. Classical Test Theory and Generalizability Theory 3.00
PSYC 825. Doctoral Seminar in Professional Psychology 1.00 - 3.00 (2 occasions; 2 credit hours per offering)
PSYC 830. Structural Equation Modeling 3.00

PSYC 832. Item Response Theory 3.00
PSYC 836. Hierarchical Linear Models 3.00
PSYC 855. Assessment Consultation and Practice 3.00
Approved Electives 9 Credit Hours
Required Research Experiences:
PSYC 879. Doctoral Assessment Practicum 2.00
PSYC 900. Doctoral Dissertation 6.00 - 12.00
Total: 57 Credit Hours

Audiology, Au.D.

This graduate clinical audiology program is a four-year post-baccalaureate program of study that prepares students for entry-level practice in the profession of audiology, including qualifying for licensure in audiology as awarded by the Virginia Board of Audiology and Speech Pathology.

Graduates are also eligible for certification in audiology granted by the American Speech-Language-Hearing Association (ASHA) unless the student opts out. Students admitted to this program are matriculated into a focused curriculum developed to prepare doctoral-level practitioners. Students admitted to the Doctor of Audiology program who already hold a master's degree in audiology will complete an individualized program of study.

Admission Requirements

- Completion of a bachelor's degree with a minimum 3.25 grade point average in major course work.
- Successful completion of any undergraduate prerequisite courses.
- General GRE scores (verbal, quantitative and writing).
- Personal written statement regarding career goals, reasons for pursuing a doctoral degree, and areas of clinical and/or research interest.
- Professional vita or resume, including names and contact details of three individuals willing to serve as references.
- Personal interview, if invited.

Degree Requirements

Required Courses

CSD 511. Instrumentation in Audiology *3.00*
CSD 512. Anatomy and Physiology of the Auditory and Vestibular Systems *3.00*
CSD 513. Anatomy and Physiology of the Central Auditory Pathway *2.00*
CSD 514. Audiologic Assessment *3.00*
CSD 515. Human Communication and Aural Rehabilitation *3.00*
CSD 516. Vestibular Physiology and Testing *3.00*
CSD 523. Psychoacoustics *3.00*
CSD 531. Industrial Audiology *2.00*
CSD 533. Business Applications in Audiology *3.00*
CSD 551. Introduction to Hearing Aids *3.00*
CSD 600. Research in Audiology *3.00*
CSD 611. Neurophysiologic Measures I *4.00 - 5.00*
CSD 621. Neurophysiologic Measures II *4.00*
CSD 622. Advanced Hearing Aids *4.00*
CSD 633. Auditory Pathophysiology *3.00*
CSD 711. Pediatric Audiology *3.00*
CSD 731. Medical Audiology *2.00*
CSD 920. Doctoral Dissertation in CSD *1.00 - 12.00*

Seminars

CSD 510. Seminar in Audiology (Clinical Methods) *1.00 - 3.00* (Clinical Methods I)

CSD 525. Seminar in Audiology (Clinical Methods II) *1.00 - 3.00* (Clinical Methods II)

CSD 550. Seminar in Audiology (Tinnitus) *1.00 - 3.00*

CSD 620. Seminar in Audiology (Research Proposal) *1.00 - 3.00* (Research Proposal)

CSD 710. Seminar in Audiology (Geriatric Audiology) *1.00* (Geriatric Audiology)

CSD 720. Seminar in Audiology (Cochlear Implants) *1.00 - 3.00*

CSD 810. Professional Seminar in Audiology *1.00 - 3.00*

CSD 820. Professional Seminar in Audiology *1.00 - 3.00*

Clinical Practicum

CSD 519. Audiology Clinical Practicum A *3.00*

CSD 539. Audiology Clinical Practicum B *2.00*

CSD 619. Audiology Clinical Practicum C *3.00*

CSD 629. Audiology Clinical Practicum D *3.00*

CSD 639. Audiology Rotation A *3.00*

CSD 719. Audiology Clinical Rotation B *3.00*

CSD 729. Audiology Clinical Rotation C *3.00*

CSD 819. Audiology Externship A *1.00 - 6.00* or CSD 839. Audiology Externship C *1.00 - 6.00* or CE 850. Professional Internship

Total: 100 Credit Hours (minimum)

Combined-Integrated (C-I) Clinical and School Psychology, Psy.D

Phone: (540) 568-6834 Website: <http://www.psyc.jmu.edu/cipsyd/>

Graduate Program Director: Dr. Kenneth Critchfield

Admission Requirements

Admission to the C-I doctoral program requires that applicants:

- have completed an advanced degree (M.A./M.S. or Ed.S.) in clinical, school or counseling psychology or a related field.
- provide general (verbal, quantitative and analytic) GRE scores (previous GRE scores may be accepted); advanced Psychology GRE scores recommended but not required.
- submit a typed statement of professional goals.
- submit three letters of recommendation from professionals familiar with their academic work and any relevant professional experiences.
- submit transcripts from all undergraduate and graduate programs attended.
- submit a current professional vitae.

Applicants may also submit a representative work sample of current skills (e.g., test reports, counseling summaries, etc.).

The program is typically initiated at a post-master's degree level; however, in some rare cases students may be admitted without a master's degree. Any exceptions to these admission requirements must be approved by the core faculty of the combined-integrated program.

Five to seven full-time students are admitted each year. Priority will be given to application materials received by February 1 in anticipation of fall admission. Group and individual interviews with both faculty and current students to assess abilities, characteristics and readiness for the program are scheduled in February. All applicants are notified of admission decisions no later than March 15. Students offered admission are expected to reply no later than April 1.

Graduate Psychology Mission

Our mission is to transform students into outstanding practitioners and scholars of psychology and counseling. We work to create a community that celebrates diversity and creativity, and that values learning, scholarship and service to others.

Mission

The mission of the C-I Doctoral Program is to produce leading health service psychologists who are broadly trained in the science and practice of psychology, actively self-reflective, optimally prepared to work in a wide variety of settings with diverse clientele, and demonstrably committed to an ethic of personal responsibility, social awareness and global engagement.

Combined-Integrated training is an innovative concept that merges the traditional professional areas of clinical, counseling and school psychology into a generalist approach that provides students with a broad foundation from which to operate. A generalist orientation opens up pathways to draw from each of the three practice areas in a manner that is complementary and synergistic. The rationale for C-I training stems from the fact that there is a) tremendous overlap in the basic training of the three specialty areas of clinical, counseling and school psychology; b) there is a need to define the core competencies of professional psychologists; and c) there are emerging trends for greater unity within the field. In regards to training objectives, we work to graduate C-I psychologists to serve as general practitioners, primary care providers and health service psychologists who can:

- understand and integrate contributions and perspectives from three major areas of applied activity in our larger field (i.e., clinical, counseling and school psychology);
- develop conceptualizations of human behavior that integrate biological, psychological and social dimensions of analysis;
- integrate various theoretical perspectives into a coherent whole; and
- work effectively in an interprofessional context.

A limited number of full-time students are admitted each year. All students receive a full-time teaching or graduate assistantship that includes tuition.

The C-I program exhibits strong commitment to diversity through:

- A required course specific to multicultural issues
- Multicultural/gender issues covered in course work throughout the curriculum
- Practical experiences with clients from a variety of cultures and backgrounds
- Faculty with interests in international issues

Curriculum

Students in the C-I doctoral program earn a doctor of psychology (Psy.D.) degree. An individualized doctoral plan of study is developed for each student consisting of courses in psychological foundations as well as courses and field experiences in the required core curriculum. Academic progress is monitored throughout the program and feedback is provided to each student periodically.

Previous graduate course work may be accepted to meet the psychological foundations courses. A minimum of 59 credit hours of doctoral core courses, however, must be taken at JMU. All students must complete a 12-month internship and a scholarly dissertation. Internships must be approved by the American Psychological Association or meet the standards set forth by APA. In addition, students completing the doctoral dissertation will be required to pay an additional fee (approximately \$55.00) for the electronic presentation of their research.

In addition to the foundational course work listed in the CI handbook, the following are required courses that must be taken at JMU; any exceptions to this curriculum must be approved by the Core Faculty.

Required Courses

PSYC 668. Couple and Family Systems 3.00

PSYC 826. Advanced Seminar in Developmental Psychopathology 3.00

PSYC 852. Leadership, Consultation and Supervision 3.00

PSYC 864. Processes of Psychotherapy 3.00

PSYC 865. Integrative Psychotherapy for Adults 3.00

PSYC 867. Advanced Diagnosis, Intervention and Treatment Planning 3.00

PSYC 878. Doctoral Practicum 1.00 - 6.00

One additional clinical content course in assessment or intervention 3 Credit Hours

PSYC 825. Doctoral Seminar in Professional Psychology 1.00 - 3.00

PSYC 881. Issues and Techniques in Research and Evaluation 1.00 - 3.00

PSYC 895. Doctoral Practicum in College Teaching 1.00 - 3.00

PSYC 900. Doctoral Dissertation 6.00 - 12.00

Total: 59 Credit Hours

Communication Sciences and Disorders, Ph.D.

A nationwide shortage of individuals with Ph.D.s in the discipline of communication sciences and disorders means that graduates are in high demand for employment in leadership positions in health facilities, universities and research centers. In addition to advanced course work related to communication disorders, students complete requirements in statistics, research design, hearing or speech sciences, a teaching/supervising internship and dissertation.

The Ph.D. program is individualized to the specific interests of the student while assuring a rigorous educational experience appropriate to the research-training and advanced knowledge characteristics of the degree. Students may be admitted to the Ph.D. program at various stages, including 1) post-masters, 2) post-baccalaureate, and 3) post-Au.D., depending upon the individual's career goals. Some students may wish to pursue clinical qualifications in either audiology or speech-language pathology while concurrently undertaking their Ph.D. studies. All admitted students will undertake an individually-designed program emphasizing research tools, research activities and in-depth exposure to a major area of interest supported by study in a minor area.

Admission Requirements

- Completion of a bachelor's degree with a minimum 3.25 grade point average in major course work.
- General GRE scores (verbal, quantitative and writing).
- Three letters of recommendation on letterhead stationery.
- Personal written statement regarding career goals, reasons for pursuing a doctoral degree, and areas of research interest.
- Personal interview.

Degree Requirements

The Ph.D. program affords a time for students to acquire the depth of knowledge, skills and experiences to empower them to create new knowledge in the field and to become expert researchers, leaders, teachers and/or supervisors. Each student's course of study is individually tailored to meet the student's interests and represents an agreement between the student and the student's advising committee.

All students must pursue an advanced course of study that will include the following components:

Core course work (8 credits)

Speech and hearing science CSD 867. Experimental Phonetics 3.00

Methods of measurement in CSD CSD 805. Methods of Measurement in CSD 3.00

Professional issues and development CSD 806. Ph.D. Professional Development Seminar I 1.00

Professional issues and development CSD 807. Ph. D. Professional Development Seminar II 1.00

Course work within the student's major area of emphasis (minimum: 14 credit hours) ¹

Course work outside, but related to, the student's major area of emphasis (minimum: 6 credit hours) ¹

Course work in statistical methods and research design (minimum: 12 credit hours) ¹

Directed research experience (minimum: 6 credit hours) ¹

Teaching and/or supervision experience (minimum: 2 credit hours) ¹

Dissertation credit (minimum: 9 credit hours) ¹

Footnote

¹ These requirements may be partially met for students holding a doctoral degree or concurrently completing another JMU doctoral program.

Sample Curriculum for Post-Masters

Requirements

Core course work 8 Credit Hours

Major concentration course work 14 Credit Hours

Outside, related course work 6 Credit Hours

Research tools 12 Credit Hours

Directed research 6 Credit Hours

Teaching/Supervision 2 Credit Hours

Dissertation (minimum of 9 credits) 9 Credit Hours

Total: 57 Credit Hours

Sample Curriculum for Post-Bachelors

Requirements

Post-Bachelors course work (individually determined) 36-44 Credit Hours

Core course work 8 Credit Hours

Major concentration course work 14 Credit Hours

Outside, related course work 6 Credit Hours

Total: 93-101 Credit Hours

Research tools 12 Credit Hours

Directed research 6 Credit Hours

Teaching/Supervision 2 Credit Hours

Dissertation (minimum of 9 credits) 9 Credit Hours

Sample Curriculum for Dual Au.D./Ph.D.

Requirements

Doctor of Audiology requirements (includes 6 credits of dissertation) 100 Credit Hours

Core course work 8 Credit Hours

Major concentration course work 3 Credit Hours

Outside, related course work 6 Credit Hours

Research tools 3 Credit Hours

Directed research 3 Credit Hours

Teaching/Supervision 2 Credit Hours

Dissertation (minimum of 5 credits) 5 Credit Hours

Total: 130 Credit Hours

Sample Curriculum for Post Au.D.

Requirements

Core course work 8 Credit Hours

Major concentration course work 3 Credit Hours

Outside, related course work 6 Credit Hours

Research tools 3 Credit Hours

Directed research 3 Credit Hours

Teaching/Supervision 2 Credit Hours

Dissertation (minimum of 5 credits – assumes 6 dissertation credits in Au.D.) 5 Credit Hours

Total: 30 Credit Hours

Counseling and Supervision, Ph.D.

Graduate Program Coordinator: Dr. Debbie Sturm

Phone: (540) 568-4564 Website: <http://psyc.jmu.edu/counseling/supervision/index.html>

Application Date

The application date is January 15. The program will give preference to applications received by that date. The committee conducts screening interviews in late February and early March.

Admission Requirements

- Minimum admissions requirements for the Ph.D. in Counseling and Supervision Program include the following:
- Completion of an advanced degree (M.A., M.S. or Ed.S) from an entry-level graduate counseling program. Applicants must have graduated from a counselor education program of at least 48 credit hours.
- Completion of 60 credit hours of graduate counseling coursework necessary for licensure as a professional counselor. Candidates must submit official transcripts documenting the completion of both undergraduate and graduate degrees, including courses that meet requirements to become a Licensed Professional Counselor (LPC).
- A history of academic success. Candidates must have a minimum undergraduate GPA of 3.0, and a minimum graduate GPA of 3.5 on a 4.0 scale.
- Resume. Candidates should submit a resume detailing their counseling-related training, work experiences and scholarship.
- Supportive references. Three individuals must complete and submit reference forms. At least one individual should be well acquainted with the candidate's academic potential. At least one person should be a supervisor or trainer who can discuss in detail the applicant's counseling skills.
- Professional writing sample. Application materials must include a published article, conference paper or academic paper in the field of counseling. The sample should be between 10 and 25 pages and written in APA format.
- Personal statement. Candidates must offer a personal statement of at least 2,000 words describing themselves and their specific interests in counseling. They are encouraged to go beyond the grades, honors, and work record that they have already provided on the application form. Instead, they are invited to share the personal qualities and life experiences that have contributed to their potential to become successful doctoral students in counseling. Finally, they should describe the professional goals and scholarly interests they plan to pursue by completing doctoral training.

TOEFL or MELAB scores, if an international applicant. International candidates for whom English is not their primary language must submit official test scores on the Test of English as a Foreign Language (TOEFL) of at least 550 on the written tests and 220 on the computer-based test. Applicants must have taken these tests within the past two years.

Mission

The Ph.D. in Counseling and Supervision is a program committed to training counselor educators, supervisors and advanced practitioners with expertise in the theory, research and practice of counseling. Our mission is to create dynamic and innovative leaders who will serve as catalysts for progress in addressing the tremendous counseling needs of individuals, families, institutions and communities.

The students, faculty and staff members of this program vary in age, class, gender, ethnicity, race, religion, sexual orientation and physical abilities. Putting our principles into practice, these diverse individuals create a learning community in which students thrive personally, grow professionally and share a common commitment to counseling. We challenge our students to continue their life-long journeys of exploring possibilities, refining skills and maintaining their professional vitality throughout their careers as counselors. We encourage them to support one another in the formidable task of becoming leaders who advance the counseling profession through service, research, innovation, advocacy and training.

Dissertation

All students must complete a scholarly dissertation. In addition, students completing the doctoral dissertation will be required to pay an additional fee (approximately \$55.00) for the electronic presentation of their research.

Degree Requirements

The Ph.D. program in counseling and supervision requires 48 credit hours beyond the 60 credit hours necessary for admission.

Required Courses

PSYC 605. Intermediate Inferential Statistics 3.00
PSYC 810. Advanced Multicultural Issues in Counseling 3.00
PSYC 840. Qualitative Research Design and Analysis 3.00
PSYC 853. Advanced Supervision in Counseling 3.00
PSYC 860. Advanced Counseling Theories 3.00
PSYC 861. Advanced Counseling Techniques 3.00
PSYC 862. Leadership and Advocacy in Counseling 3.00
PSYC 863. Counselor Education 3.00

PSYC 866. Crisis and Emergency Services for Counselors 3.00
PSYC 881. Issues and Techniques in Research and Evaluation 1.00 - 3.00
PSYC 882. Doctoral Practicum in Counseling 3.00
PSYC 892. Doctoral Internship in Counseling, Supervision, and Teaching 2.00 - 6.00
PSYC 900. Doctoral Dissertation 6.00 - 12.00
Elective 3 Credit Hours
Total: 48 Credit Hours

Musical Arts, Doctor of Musical Arts, D.M.A.

Doctor of Musical Arts Curriculum

The Doctor of Musical Arts (D.M.A.) degree program is the most advanced course of study offered in the School of Music at James Madison University. The program has been designed to make graduates more marketable in higher education by emphasizing pedagogy and literature along with advanced performance or conducting skills. The program seeks candidates who have the potential to pursue the highest level of achievement in conducting/performance and teaching.

The three-year degree requires completion of 60-72 credit hours, including core and concentration requirements. There is a two-year residency requirement. In the third year of the degree, D.M.A. students must pass comprehensive written and oral examinations.

Doctor of Musical Arts Admissions Requirements

- The Graduate School Application, available online.
- D.M.A. Program Application (part of The Graduate School application) on <https://app.getacceptd.com/jmu>.
- Official transcripts of all undergraduate and graduate course work. Applicants must have earned a Master of Music degree or its equivalent before the semester of intended enrollment in the D.M.A. program.
- Written statement of future goals (professional and educational).
- Curriculum vitae (C.V.).
- Three current letters of recommendation from professors, employers and other professionals qualified to judge the applicant's ability to complete doctoral studies.
- A live audition or a high-quality audio/video recording for conditional admission.
- TOEFL of at least 550 (written test) for international students.
- A financial statement prior to application for international students.

Additional Requirements for International Applicants

See the Office of International Programs website for other requirements and information for international students.

Assistantships

Financial Aid is administered by the Office of Financial Aid and Scholarships in the Student Success Center. The chief source of aid for graduate study is through assistantships awarded by the school. Teaching assistantships are awarded each year on a competitive basis. In keeping with the pedagogical nature of the D.M.A. degree at James Madison University, doctoral assistantships will include a variety of supervised teaching experiences: assisting professors in classes and/or being responsible for teaching a class, teaching applied lessons (for performers) and conducting ensembles (for conductors). In addition to a stipend, assistantships include a tuition award.

Class Fees

There is a once per semester fee for enrollment in MUAP 600 and MUAP 700, applied lessons. See MyMadison for details.

Entrance Examinations

Prior to the first week of classes, all applicants must take JMU School of Music diagnostic examinations in music history, written theory and ear training. The results are used for placement and advising. Applicants for assistantships in areas related directly to these examinations may be required to take them before assistantships are granted.

Objectives

Students graduating from the D.M.A. program with concentrations in either performance, pedagogy and literature or conducting, pedagogy and literature will be able to:

Performance, Pedagogy and Literature

- demonstrate application of musical and technical mastery through the performance of advanced repertoire in the student's area of specialization (instrumental or vocal).
- create and deliver effective pedagogical instruction.
- analyze the standard solo, chamber and ensemble repertoire in the student's area of specialization (instrumental or voice).

Conducting, Pedagogy and Literature

- demonstrate application of musical and physical conducting skills through the performance of advanced repertoire in the student's area of specialization (instrumental or vocal).
- demonstrate effective rehearsal techniques through the preparation of representative repertoire in the student's area of specialization (instrumental or vocal).
- create and deliver effective pedagogical instruction.
- formulate advanced insights into the artistic and formal structure of music through score study in the student's area of specialization.
- communicate effectively about music through writing and speaking.

Core Requirements

MUAP 700. Applied Music Lesson 1.00 - 4.00 ¹

(to be repeated for 12-18 credit hours)

MUPED 704. Music Pedagogy in Higher Education 3.00

MUS 600. Research Methods 3.00

(in exceptional cases, students with recent credit in an equivalent graduate course may attempt to test out of MUS 600 by exam)

MUS 750. Graduate Musicology or Ethnomusicology Seminar 3.00

(taken twice for a total of 6 credit hours)

Approved electives (MUPED 705, MUPED 706, MUS 702 or MUS 750) 3.00

Approved music electives 0-3 Credit Hours ¹

MUS 761. Doctoral Recital 3.00

(taken three times for a total of 3 credit hours)

MUS 762. Doctor of Musical Arts Lecture Recital 3.00

MUS 763. Doctor of Musical Arts Document 1.00 - 3.00

Footnote

¹ Up to 3 credits may be waived. See Graduate Student Handbook or adviser for more information.

(may be taken one credit at a time until 3 credits have been accumulated)

Choose two: 6 Credit Hours

Determined by diagnostic exam. The category will be fulfilled by taking both MUS 601 and MUS 702 or by taking MUS 702 twice.

MUS 601. Advanced Tonal Analysis and Introduction to Post-tonal Analysis 3.00

MUS 702. Advanced Seminar in Music Theory 3.00

Choose one: 3 Credit Hours

MUPED 705. Music Pedagogy in Higher Education II: Teaching Music History and General Education 3.00

MUPED 706. Music Pedagogy in Higher Education III: Theory 3.00

Total: 40-52 Credit Hours

Concentration Requirements: 20 Credit Hours

Total Credits: 60-72 Credit Hours

Areas

Brass Area

MUPED 760. Applied Brass Pedagogy 3.00
MUS 703T. Solo Brass Literature 3.00
MUS 758. Brass Ensemble Literature 3.00

Conducting Area

MUS 707A. Score and Literature Survey for Choral Conductors I 3.00 or MUS 707B. Score and Literature Survey for Orchestral Conductors I 3.00 or MUS 707C. Score and Literature Survey for Wind Conductors I 3.00
MUS 708A. Score and Literature Survey for Choral Conductors II 3.00 or MUS 708B. Score and Literature Survey for Orchestral Conductors II 3.00 or MUS 708C. Score and Literature Survey for Wind Conductors II 3.00

Percussion Area

MUPED 750. Applied Percussion Pedagogy 3.00
MUS 703P. Solo Percussion Literature 3.00
MUS 704P. Percussion Ensemble Literature 2.00
MUS 706P. Percussion Ensemble Literature Lab 1.00¹
MUAP 654. Percussion Ensemble 0.00 - 1.00

Piano Area

MUPED 770. Group Piano Pedagogy Seminar 0.00 - 1.00
MUPED 771. Graduate Applied Piano Pedagogy 2.00
MUS 703F. Seminar in Piano Literature 3.00 (must be taken 3 times for a total of 9 credit hours)

String Area

MUPED 725. String Pedagogy for Major Instrument I. 2.00
MUPED 726. String Pedagogy for Major Instrument II 2.00
MUAP 650. String Chamber Music Performance 2.00

Vocal Area

MUPED 777. Vocal Pedagogy I 3.00
MUPED 778. Vocal Pedagogy II 3.00
MUS 703A. Seminar in Vocal Literature 2.00

Optional Singing Health Emphasis

(in addition to the Performance Requirements for Vocal)

Minimum Requirements

CSD 656. Voice Disorders 2.00
PSYC 601. Special Topics in Psychology 1.00 - 3.00
MUPED 777. Vocal Pedagogy I 3.00
MUPED 778. Vocal Pedagogy II 3.00
CSD 582. Speech Practicum B 2.00
(clinical observation at the JMU/Rockingham Community Hospital Collaborative Voice and Swallowing Clinic)

Undergraduate Prerequisites

This emphasis requires three undergraduate courses as prerequisites.

CSD 208. Anatomy and Physiology of the Ear and Voice Mechanism 3 Credit Hours
CSD 209. Acoustics of Hearing and Speech 3 Credit Hours

Comprehensive Final Examination

Each student in the Singing Health Emphasis must successfully pass a written and oral practical examination administered by the Singing Health Specialist Coordinating Committee. This final examination is in addition to the comprehensive examination for the D.M.A. in Vocal Performance.

Woodwind Area: Performance on a Solo Instrument Track

MUPED 772. Applied Woodwind Pedagogy 2.00
MUPED 773. Woodwind Pedagogy Practicum 2.00
Approved Large Ensembles 8 Credit Hours
MUAP 651. Woodwind Ensemble 0.00 - 1.00 (4 credit hours required)

Woodwind Area: Multiple Woodwind Track

Applied instruction on a third instrument beyond the core applied instruction 8 Credit Hours¹
MUPED 672. Secondary Woodwind Pedagogy 1.00
MUPED 772. Applied Woodwind Pedagogy 2.00
Approved Large Ensembles 8 Credit Hours

Approved Chamber Ensembles (two semesters) 2 Credit Hours
Approved Large Ensembles 2 Credit Hours
Approved Electives 7 Credit Hours
Total: 20 Credit Hours

MUAP 708A. Doctoral Secondary Applied Conducting – Choral 2.00 or MUAP 708B. Doctoral Secondary Applied Conducting – Orchestral 2.00 or MUAP 708C. Doctoral Secondary Applied Conducting – Wind Band 2.00
MUS 703H. Seminar in Choral Literature for Conductors 2.00 or MUS 703I. Seminar in Orchestral Literature for Conductors 2.00 or MUS 703J. Seminar in Wind Literature for Conductors 2.00
Approved Electives 6 Credit Hours
Total: 20 Credit Hours

Approved Large Ensembles 7 Credit Hours
Approved Electives 3 Credit Hours
Total: 20 Credit Hours

Footnote

¹ Must be taken the same semester as MUS 704P.

MUS 740. The German Lied for Pianists and Singers 2.00
MUAP 709. Graduate Piano Seminar: Preparing for the Job Market 1.00
Approved Electives 3 Credit Hours
Total: 20 Credit Hours

MUAP 731. String Orchestral Excerpts 2.00
Approved Electives 6 Credit Hours (To include MUPED 727, MUAP 699, additional MUAP 731)
Total: 20 Credit Hours

MUS 703B. Opera History and Literature 3.00
Ensembles 2 Credit Hours
Approved Electives 5 Credit Hours (To include MUPED 779, MUS 740, MUAP 700)
Total: 20 Credit Hours

Electives (choose two of the following): 6 Credit Hours
CSD 604. Neuroanatomy and Neurophysiology of Speech & Language 3.00
CSD 605. Physiological and Acoustical Phonetics 3.00
PSYC 614. Advanced Developmental Psychology 3.00
Total: 22 Credit Hours

KIN 202. Biological Foundations of Kinesiology 3 Credit Hours

Approved Electives 4 Credit Hours
Residency Qualifying Recital: At the end of the first year, the student will play in a thirty-minute recital for the woodwind faculty.
Total: 20 Credit Hours

Residency Qualifying Recital: At the end of the first year, the student will play in a thirty-minute recital for the woodwind faculty.
Total: 20 Credit Hours

Footnote

¹ This track requires 16 credits of the applied instruction in the core requirements to be on a primary instrument and 8 credits on a secondary instrument. Eight additional credits will be used in the 20 credit hours for a

third instrument. It also requires two of the required recitals in the core to be on the primary instrument and the third recital to be divided between the second and third instruments (50% each).

Additional Information

Students will be required to show competency in three languages in addition to English: French, Italian and German. Transcripts of previous college study must show a minimum of four semesters of two of the languages and two semesters of the third language, or credit through the intermediate level in two of the languages and through the beginning level of the third language. In some cases where languages have been learned through means other than traditional college classes, competency equivalents can be shown by taking the JMU Foreign Language Placement tests for French, German and Italian and placing at the 300-level for two of the languages and at the 231-level for the third. If neither option applies, the languages must be taken at JMU as a remedial requirement.

Nursing, Doctor of Nursing Practice, D.N.P.

The D.N.P. program prepares students to lead healthcare innovation at the highest organizational level and influence policy while allowing students to focus on a particular specialty area. The D.N.P. nurse impacts the practice of nursing, the healthcare delivery system and the shaping of health policy by providing the environment, resources and knowledge needed to provide high quality patient and family-centered nursing care and to practice as a professional within an interprofessional team. The program's curriculum consists of 31 to 46 credit hours, including 1,000 course-related practice hours post-B.S.N.

Admission

To be considered for admission to the D.N.P. program prospective students must:

- Hold a master's degree in nursing from a nationally accredited institution with a minimum 3.2 graduate studies GPA.
- Submit an official transcript from each post-secondary institution attended.
- Hold an unencumbered Registered Nurse license.
- Select a focus area for doctoral study:
 - Leadership in Healthcare Systems- national certification is desired but not required.
 - Advanced Practice Nursing applicants- APRN (Advanced Practice Registered Nurse) designation in their home states and national board certification as a Clinical Nurse Specialist, Nurse Practitioner, Certified Nurse Midwife, Clinical Nurse Leader, or Certified Registered Nurse Anesthetist in their areas of specialty (as appropriate). Applicants without national certification will be individually evaluated but must submit evidence of their specialty expertise.
- Complete the online application for The Graduate School which includes submission of letters of recommendation from at least two persons and a statement of professional goals.
- Be admitted to The Graduate School.
- Meet the school's technical standards for admission.
- Meet the school's disability accommodation standards.
- Provide a current resume or curriculum vitae.
- Complete an interview upon request.
- Complete health documentation and CPR certification.
- For international students, provide evidence of passing grade on CGFNS exam (both parts) or IELTS score of at least 7.0, apply for VA RN license (TOEFL 570 required). Contact program director for more information. Additional documentation will be required upon admission.

Application Deadline

Applications are processed on a rolling admission basis until the class fills.

Application Evaluation Criteria

Evaluation criteria includes previous academic and scholarly work, professional experience, professional references, and a professional goal statement and its relationship to both the mission of the School of Nursing and the area of scholarly inquiry focus. Professional references will be reviewed, and an interview may be required.

D.N.P. Curriculum

NSG 650. Organizational Behavior in Health Care 3.00

NSG 690. Epidemiology and Population Assessment 3.00

NSG 692. Health Policy for Practice and Advocacy 3.00

NSG 711. Analytical Methods for Health Care 3.00

NSG 712. Issues and Methods in Translational Inquiry 3.00

NSG 713. Evidence Based Practice: Clinical Prevention and Population Health Promotion 3.00

NSG 714. Evidence Based Practice: Chronic Illness 3.00

NSG 771. Advanced Practicum I 1.00 - 5.00 ¹

NSG 772. Advanced Practicum II 1.00 - 5.00 ¹

NSG 773. Advanced Practicum III 1.00 - 5.00 ¹

NSG 799. DNP Project 1.00

Continuous 1.00 repeatable

NSG 800. Scholarly Writing and Presentations 3.00

Cognates 6 Credit Hours ²

Total: 31-46 Credit Hours

Footnotes

¹ The D.N.P. requires 1000 course-related practice hours post B.S.N. to D.N.P. Post-master's students will have completed a variable number of M.S.N. contact hours. ² Cognate courses can be taken any semester, including summer. N.B.: Up to nine credits may be transferred/waived.

Strategic Leadership, Doctor of Philosophy, Ph.D.

Graduate Program Director

Dr. Karen A. Ford, DSW

Phone: (540) 568-7020

Email: ssls@jmu.edu

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

Professors

K. Ford, M. Sloan

Assistant Professors

B. Selznick, A. Vanhove

Admission Criteria and Degree Requirements

All applicants must first satisfy the general application requirements of The Graduate School as described for prospective graduate students.

The School of Strategic Leadership Studies requires applicants to have a master's degree from an accredited institution. The school welcomes applicants from any area or discipline, but applicants should have completed an introductory statistics course and an undergraduate financial accounting course. Other background course work may be required depending upon the student's concentration.

To Apply

For information about the application process, an online application form and instructions, create an account via the Applicant Center at <http://www.applyweb.com/apply/jmug/index.html>. All application materials are uploaded through this website.

Required Materials

A master's degree from an accredited institution is required for all applicants. In addition, the School of Strategic Leadership Studies requires all prospective applicants to submit evidence of the following:

- GRE or GMAT scores.
- official transcripts from all colleges and universities attended.
- a brief (250 words) statement of purpose that identifies the applicant's reason for applying, intended field of concentration and long-range career aspirations.
- three (five preferred) years of full-time equivalent work experience.
- a current résumé or CV that details the applicant's relevant job experience.
- three personal evaluations along with letters of recommendation (including at least one from a current or former direct supervisor).

two scholarly or professional samples that demonstrate the applicant's ability to conduct research.

The program highly recommends that applicants communicate with the school prior to submitting their application. Prospective students should contact the school to set up a phone discussion or in-person meeting to fulfill this requirement. Per conversation with the Educational & Student Support Specialist, an in-person meeting or phone conversation will be scheduled with the program director.

Application Deadlines

The application deadline is March 1 for fall admission (preferred) for the postsecondary analysis & leadership, nonprofit & community leadership, and organizational science & leadership concentrations. Incomplete applications are not considered. Applicants are responsible for assuring all materials have been received by reviewing their status online in the Applicant Center. To check on the status of references, contact ssls@jmu.edu. All other application materials can be viewed by logging on to the Applicant Center.

Mission

James Madison University offers an innovative doctoral program in Strategic Leadership Studies with three specialty concentrations:

- Postsecondary Analysis & Leadership
- Nonprofit & Community Leadership
- Organizational Science & Leadership

This program emphasizes business principles, accountability, and leadership theory and applications, which are all areas of reform that national groups have touted as important for new organizational, nonprofit and higher education leaders. Students will be instructed in the broader visionary perspectives necessary for effective leadership. The program emphasizes practical applications grounded in sophisticated research skills needed for data-based, innovative decision-making in current and future practice.

The leadership course work encompasses models, theories and processes which are tested through application to situations faced by practicing leaders. The capstone leadership course requires an externship. In addition to leadership course work, students enroll in clusters of courses centered on research methodology including: measurement; statistics and accountability; business administration; managerial finance and accounting for decision-making and control; and a specialty concentration of organizational science & leadership, postsecondary analysis & leadership, or nonprofit & community leadership. Students in all concentrations study strategic management and advanced leadership dynamics.

Curriculum for All Concentrations

Required Courses

LEAD 700. Introduction to Leadership Studies and Ethics 3.00

LEAD 705. Advanced Research Methods in Leadership Studies 3.00

LEAD 740. Foundations of Postsecondary Education 3.00

LEAD 750. Organizational Theory 3.00

LEAD 760. Proseminar in Principles of Nonprofit Organizations 3.00

LEAD 890. Advanced Leadership Dynamics 3.00

LEAD 891. Externship in Advanced Leadership 3.00

LEAD 900. Doctoral Dissertation 3.00 - 12.00

Assessment Course (chosen based on concentration) 3.00

Statistics and Business Required Courses ⁴

PSYC 605. Intermediate Inferential Statistics 3.00

PSYC 606. Measurement Theory 3.00

PSYC 608. Multivariate Statistical Methods in Psychology 3.00

MBA 617. Corporate Financial Decision-Making 3.00

MBA 620. Accounting for Decision-Making and Control 3.00

MBA 691. Strategic Management 3.00

Elective Courses

Choose four of the following:

LEAD 710. Advocacy for Change Leadership 3.00

LEAD 711. Effective College Teaching 3.00

LEAD 751. Organizational Behavior and Leadership 3.00

LEAD 752. Organizational Change and Strategic Human Resource Management 3.00

LEAD 761. Civil Society and the Nonprofit Sector 3.00

LEAD 762. Organizational Governance 3.00

LEAD 763. Philanthropy and Resource Development 3.00

LEAD 780. Policy Development and Analysis in Postsecondary Education 3.00

LEAD 790. Postsecondary Dynamics 3.00

PSYC 830. Structural Equation Modeling 3.00

PSYC 836. Hierarchical Linear Models 3.00

PSYC 840. Qualitative Research Design and Analysis 3.00

Total: 57-66 Credit Hours

Footnotes

¹ Students may be allowed to activate variable credit regarding these courses with prior approval. All requests for variable credit will be assessed individually by SSLS to ensure that the replacement course meets the academic rigor and content standards of the equivalent course at JMU. Students should speak with their adviser.

Nonprofit & Community Leadership Concentration

The nonprofit & community leadership concentration includes coursework in civil society and the nonprofit sector, nonprofit organizational issues, governance of nonprofit organizations and philanthropy and resource development.

Curriculum Requirements

All Required Courses

LEAD 764. Leadership and Accountability for Nonprofit Organizations 3.00

Organizational Science & Leadership Concentration

The organizational science & leadership concentration includes coursework in organizational behavior, theory, design and strategy for graduates pursuing careers in organizational consulting, advising, college level instruction or research and writing.

Curriculum Requirements

All Required Courses

LEAD 754. Strategic Leadership Decision Making 3.00

Postsecondary Analysis & Leadership Concentration

The postsecondary analysis & leadership concentration utilizes a scholarly approach for graduates wishing to work in a variety of settings within the field of postsecondary education.

Curriculum Requirements

All Required Courses

PSYC 770. Assessment and Public Policy 3.00

Accounting, M.S.

Director

Dr. Michael Riordan

Phone: (540) 568-3027

Graduate Program Director

Dr. Nancy Nichols

Phone: (540) 568-8778

Website: <http://www.jmu.edu/cob/graduate/msa/index.shtml>

Professors

L. Betancourt, P. Copley, D. Fordham, A. Gabbin, D. Hayes, N. Nichols, M. Riordan, B. Roof

Associate Professors

J. Briggs, S. Cereola, R. Richardson

Assistant Professor

I. Scott

Admission Criteria and Degree Requirements

Admission is open to individuals with a baccalaureate degree in accounting, business or any non-business discipline. Either the Graduate Management Admissions Test (GMAT) or successful completion of all four parts of the CPA exam is required for admission to the M.S. program. Prerequisites are based on the background and previous training of the student. More information on general admission requirements is available from The Graduate School website.

Prerequisites

All students must be proficient with a spreadsheet program and have the following courses (or their equivalent) prior to starting M.S. course work.

Accounting Courses

Auditing

Federal Income Tax Accounting

Intermediate Accounting II

Cost Accounting

Intermediate Accounting I

Business Courses

Business Law

Micro Economics

Statistics

Macro Economics

Organizational Behavior

Managerial Finance

Principles of Management

Mission

The mission of the School of Accounting's Master of Science program is to provide a strong regional presence for advanced professional education that prepares 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.

The Graduate Accounting program leads to the Master of Science (M.S.) in Accounting degree. The primary goal of the M.S. program is to prepare business and nonbusiness majors for entry into the public accounting profession. It serves as the "fifth" year in preparing students for the 150 hours of postsecondary education required for AICPA membership and required (or scheduled to be required) to become a certified public accountant in most jurisdictions.

James Madison University offers an on-campus program tailored for individuals who prefer a traditional full-time program of study. The on-campus program is also available on a part-time basis.

Master of Science Degree in Accounting

The course work for the M.S. program consists of a common core and electives with a thesis option. Thirty credit hours must be taken at the 500 or 600 level.

M.S. in Accounting Requirements

MBA 630. Financial Management for Accountants 3.00

Accounting electives (600 level) 15 Credit Hours²

Electives (500 or 600 level) 9 Credit Hours

Choose one of the following: 3 Credit Hours

ACTG 625. Tax Research and Strategy 3.00¹

ACTG 675. Accounting Theory 3.00

Total: 30 Credit Hours

Footnotes

¹ This course is considered the capstone in the program. Successful completion of one of the three courses with a "B" or better is required. ² Electives are chosen with the approval of the program director. Prerequisites must be met before taking 600-level courses.

Taxation Concentration

The tax concentration is a challenging curriculum that prepares students for tax careers in public accounting and private industry. In addition to technical skills, students learn how to find answers to tax issues using Web-based research services and how to communicate their research findings in writing and in oral presentations.

The tax concentration requires 12 hours of tax-related courses.

Taxation Concentration Requirements

ACTG 625. Tax Research and Strategy 3.00

ACTG 627. Advanced Taxation of Business Entities I 3.00

ACTG 628. Advanced Taxation of Business Entities II 1.00-3.00

ACTG 629. Selected Topics in Taxation 1.00 - 3.00

Total: 12 Credit Hours

School of Art and Art History

Director

Dr. Katherine Schwartz

Phone: (540) 568-6216

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

Graduate Program Directors

Dr. Cole Welter, Studio Art

Dr. William H. Wightman, Art Education

Professors

C. Diop, D. Ehrenpreis, L. Halpern, L. Katzman, J. Ott, M. Rooker, K. Schwartz, M. Shanahan, R. Silberman, G. Stewart, A. Taylor, R. Tomhave, L. Tubach, C. Welter, W. Wightman, S. Zurbrigg

Associate Professors

A. Adesanya, A. Barnes, S. Brooks, S. Choi, R. Hilliard, W. Stevens, K. Tollefson-Hall

Assistant Professors

R. Mertens, K. Phaup

Mission, Vision and Goals

Mission

We collaborate as creators and scholars to advance diversity and independent thought through rigorous practice and research.

Vision

To radically transform ourselves and our communities through creative and scholarly work:

- to evolve the new
- to navigate the unknown
- to build capacities
- to dare

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.

Degrees and Concentrations

The School of Art, Design and Art History offers the Master of Fine Arts degree in studio art and the Master of Arts in art history, art education and studio art.

Art Education, M.A.

Application and Portfolio Deadlines

M.F.A. and M.A. in Studio Art

- Fall Semester: January 19, 2018

M.A. in Art Education

- Summer Semester: Rolling admission

Applications received after the deadline, or applications that are incomplete as of the deadline, may not receive full consideration.

Mission

The Master of Arts in Art Education at JMU is a graduate program for certified art educators dedicated to excellence in teaching and directing comprehensive art education programs in schools, museums, art organizations or the private sector. The program includes in-depth analysis of the methods and techniques for teaching studio art, art history, art criticism, aesthetics and visual culture. The program promotes graduates who are:

- Dedicated art education professionals.
- Articulate art education advocates.
- Charismatic leaders who demonstrate art education as a vital component of general education.

Goals

- To provide students with the structure, skills, core concepts and methods of inquiry for teaching and directing comprehensive art education programs, including: aesthetics, art criticism, art history, studio production and visual culture.
- To provide students with opportunities to create and evaluate art instructional opportunities that are adapted to diverse learners.
- To provide opportunities for students to demonstrate an extensive range of strategies for teaching and evaluating art instruction, including the use of technology.
- To foster active inquiry, collaboration, and supportive interaction among students for developing thesis papers and projects.
- To deepen a student's knowledge in a specific area of art education scholarly interest.
- To provide students with access to the latest research on how children learn and develop and how culture influences human development and creative artistic expression.
- To provide students with access to the latest research on how children learn to understand, appreciate, create and judge works of art.
- To provide students with opportunities to apply research to art lessons that support intellectual, social and personal development.

Application Requirements

In addition to the requirements of The Graduate School, applicants must meet additional qualifications established by the School of Art, Design and Art History.

The candidate must have an undergraduate degree with a minimum of 33 credit hours in studio art and nine credit hours in art history. The art history hours must include six hours surveying the history of Western art and three hours in upper-level art history. The candidate must have an art-teaching license and submit:

- Three letters of recommendation.
- A teaching philosophy.
- An example lesson plan demonstrating comprehensive art education.
- A personal statement as an indication of preparation for graduate study.
- Evidence of a current art teaching license is required to waive the GRE.

Program Requirements

The program of study includes nine hours in art education, three hours in art history, three hours in criticism, nine hours in education and/or art education electives (Directed Study), and six hours of thesis.

Master of Arts in Art Education Requirements

Art Education 9 *Credit Hours*

Art History 3 *Credit Hours*

Art Criticism 3 *Credit Hours*

Thesis 6 *Credit Hours*

Education/Art Education electives 9 *Credit Hours*

Total: 30 Credit Hours

Art, Art History, M.A.

Not accepting students for the academic year 2019-20.

Art, Studio Art, M.A.

Application and Portfolio Deadlines

M.A. in Studio Art

- Fall Semester: January 17, 2020

Applications received after the deadline, or applications that are incomplete as of the deadline, may not receive full consideration.

Mission

The mission for the Master of Arts Program in Studio Art is to support artistic growth beyond the level of the baccalaureate. Although the goals for the M.A. reflect those of the M.F.A., the M.A. degree is viewed as an option for studio study, which does not result in a terminal degree in the visual arts.

Goals

- To develop and improve artistic skills in two- and three-dimensional art.
- To promote the candidate's ability to develop ways of individual inquiry.

Application Requirements

In addition to the requirements of The Graduate School, applicants must meet additional qualifications established by the School of Art, Design and Art History.

Candidates must meet the same admission requirements as candidates for the Master of Fine Arts degree. The Master of Arts in studio art requires a minimum of 30 credit hours.

Program Requirements

The program of study includes 15 hours of studio in the applicant's area of interest, six hours of art history including ARTH 572. Modern Art Since 1945, three hours of contemporary art theory and six hours of elective credit. Near the end of the program of study, the candidate must produce an exhibition of his/her graduate artwork, a digital portfolio of the exhibition (to be retained by the university) and a written statement clarifying the student's work, its development and its cultural and historical references. An oral comprehensive examination, generally in conjunction with the exhibition and closely related to the written statement, will also be held.

A program of study for the Master of Arts degree must be approved by the student's adviser and art school director before final acceptance. Up to nine hours of graduate transfer credit may be accepted toward the Master of Arts degree and must meet the same criteria as those accepted for the Master of Fine Arts degree. No more than six hours of transfer credit will be accepted in the candidate's area of interest.

Master of Arts in Studio Art Requirements

ART 593. Contemporary Art Theory 3.00

ARTH 572. Modern Art Since 1945 3.00

ART 600. Graduate Integrative Seminar 3.00

(Repeated for a total of six credits)

Art, Studio Art, M.F.A.

Application and Portfolio Deadlines

M.F.A. and M.A. in Studio Art

- Fall Semester: January 19, 2018

M.A. in Art Education

- Summer Semester: Rolling admission

Applications received after the deadline, or applications that are incomplete as of the deadline, may not receive full consideration.

Mission

The mission for the Master of Fine Arts Program is to challenge and support independently motivated artists in their intellectual, philosophical and artistic development. The graduate program encourages life-long learning, career success and community involvement.

Goals and Objectives

- To provide a safe, healthy and well-equipped studio environment promoting the development of each candidate's creative life.
- To offer study in collaboration with an exemplary faculty who challenge candidates to develop artistic skills demonstrating a professional competence.
- To advance each candidate's ability to articulate a personal aesthetic, philosophical and conceptual mode of individual inquiry.
- To equip candidates with a deepened knowledge of artistic history and culture as it relates to their chosen area(s) of artistic pursuit.
- To graduate candidates who have a heightened awareness of contemporary issues and who are prepared to develop an artistic career beyond the university as engaged and productive members of their communities.

Application Requirements

In addition to the requirements of The Graduate School, applicants must meet additional qualifications established by the School of Art, Design and Art History. Three letters of recommendation, a portfolio of the applicant's artwork, an artist's statement, transcripts of undergraduate degree work and a personal statement addressing the applicant's purpose in pursuing graduate studio work must be submitted as an indication of preparation for graduate study. The portfolio must consist of 10–15 examples of the applicant's work in digital

format. The applicant for the Master of Fine Arts program must have at least half of the artwork in the portfolio in the intended area of emphasis. This portfolio must be submitted online to the School of Art, Design and Art History for examination before action on an application for graduate admission takes place.

Program Requirements

The Master of Fine Arts degree is considered the professional and terminal degree in studio art. The degree requires a minimum of 60 credit hours. In addition to the general admission requirements, the prospective graduate student in the Master of Fine Arts program must have an undergraduate degree with a minimum of 33 credit hours in studio art and nine credit hours in art history. The art history hours must include six hours surveying the history of Western art and three hours in upper-level art history.

The MFA degree is awarded for a high level of professional competence. The MFA in Studio Art is designed to provide studio, historical, and theoretical studies in art at a level advanced beyond the preliminary professional baccalaureate degree, the BFA in Studio Art.

The MFA student at JMU is expected to embrace an interdisciplinary approach to art making resulting in new works of art that rely on both diverse and unconventional methods of studio practice and inquiry. The program promotes visual arts practice as a critical form of research inquiry that is both relevant and necessary within a 21st century context.

The minimum requirement for the Master of Fine Arts degree in studio art is 60 hours of graduate credit. The 60 credits must include 33 credit hours of studio art, 6 credit hours in art history at the 500-600 level, with three credits in ARTH 572 *Modern Art Since 1945* (or an approved substitute), three credits of art history electives, with non-Western art history recommended, and three credit hours in ART 593 Contemporary Art Theory. Thesis credit hours will count as studio art credits.

A Master of Fine Arts candidacy review will be held after 18 credit hours have been completed to determine whether the student's growth and potential merit continuation in the Master of Fine Arts program. At the end of each semester, graduate faculty will participate in an open graduate review of the student's work where each student will formally present his/her work to the graduate faculty, graduate students and any others in attendance for discussion. An assigned committee of graduate faculty will write a formal evaluation for each student.

During the last two semesters of the program of study, the Master of Fine Arts candidate will enroll in ART 700. Thesis Research. By the end of the final semester, the student must complete a thesis exhibition, a gallery talk, and a thesis monograph clarifying the student's work, its development, and its cultural and historical references. The monograph must be formatted to suit The Graduate School thesis guidelines and deadlines and must have images of the thesis exhibition inserted. A digital copy will be kept in the school archives. An oral comprehensive examination, generally in conjunction with the exhibition and closely related to the monograph, must also be completed.

Up to 30 hours of graduate credit from James Madison University, or nine hours of graduate credit from other accredited institutions, may be accepted toward the Master of Fine Arts degree if a) the credits were earned within the last six years, b) the student received a grade of "B" or better, c) the transfer credit is from an institution offering a comparable degree, and d) the student submits this request with the application to The Graduate School and the application is supported by transcripts and portfolio of artwork from the courses taken at other institutions. No more than nine hours of transfer credit will be accepted in the student's area of concentration.

Master of Fine Arts Requirements

Studio (12-18 credit-hour minimum within a concentration) *39 Credit Hours*

Art History (including 3 credits in ARTH 572. *Modern Art Since 1945* and three credits of non-Western recommended) *12 Credit Hours*

ART 593. Contemporary Art Theory *3.00 3 credit hours*

Electives (art or non-art) *6 Credit Hours*

Total: 60 Credit Hours

Athletic Training, Master of Science in Athletic Training, M.S.A.T.

Department of Health Professions

Phone: (540) 568-7658

Website: <http://healthprof.jmu.edu>

Academic Unit Head

Dr. Kirk Armstrong

Professors

H. Amato, P. Maxwell, J. Wenos

Associate Professors

J. Akers, R. Dorne, J. Frye, S. Maiewski, C. Peterson, A. Temple, D. Torisky, G. Weniger

Assistant Professors

A. Dengo-Flores, K. Liskey, A. Massey, A. Russell Yun, W. Simmons, A. Skelly, J. Walsh, X. You

Instructors

K. Harrison, E. Richardson

Lecturer

M. Daniels

Mission

The graduate programs in health professions are dedicated to preparing students to become evidence-based critical thinkers in the health sciences. Specifically, these programs build upon the undergraduate health sciences programs by providing a more detailed knowledge base that is fortified by self-directed learning experiences and the development of practical, clinical and/or research skills.

Goals

The specific goals of the graduate programs in health sciences are designed to help students develop their critical thinking abilities while expanding their knowledge in the rapidly changing health-related environments. Specifically, students will be able to:

- critically evaluate the current research in the ever-broadening field of health.
- access current literature in the health fields.
- interpret current health-related research.
- develop basic research skills.
- describe and evaluate various health education models.
- critically evaluate past and present health care administration strategies.

The mission and goals are based, in part, on the Standards for the Preparation of Graduate-Level Health Educators.

In the Master of Science programs, courses must be selected with the approval of the major adviser in accordance with the program requirements. Students electing a major in the health sciences department are expected to have adequate undergraduate preparation in the chosen area of graduate study and satisfactory Graduate Record Examination scores.

Students entering the dietetics or nutrition and physical activity concentrations of the health sciences graduate program who do not possess the required prerequisites must obtain them before beginning the program.

Athletic Training, M.S.A.T.

Program Requirements

Core Courses

ATEP 511. Foundation of Athletic Training 3.00

ATEP 512. Emergency Management of Injuries & Illnesses 4.00

ATEP 513. Clinical Applications of Human Gross Anatomy 4.00

ATEP 524. General Medicine for the Athletic Trainer Part I 3.00

ATEP 525. Lower Extremity Orthopedic Examination 4.00

ATEP 534. General Medicine for the Athletic Trainer Part II 3.00

ATEP 535. Upper Extremity Orthopedic Examination 4.00

ATEP 537. Evidence Based Practice in Athletic Training 3.00

ATEP 645. Hip, Pelvis and Spine Orthopedic Examination and Rehabilitation 3.00

ATEP 657. Applications in Evidence Based Practice 3.00

ATEP 660. Administration in Athletic Training 3.00

Total: 37 Credit Hours

Total: 72-73 Credit Hours

Recommended Schedule

First Year

Summer Semester: 11 Credit Hours

ATEP 511. Foundation of Athletic Training 3.00

ATEP 525. Lower Extremity Orthopedic Examination 4.00

ATEP 526. Therapeutic Interventions I 4.00

Fall Semester: 15 Credit Hours

ATEP 512. Emergency Management of Injuries & Illnesses 4.00

ATEP 535. Upper Extremity Orthopedic Examination 4.00

ATEP 536. Therapeutic Interventions II 4.00

ATEP 521. Clinical I: Psychosocial Concepts and Cultural Sensitivity 3.00

Spring Semester: 13 Credit Hours

ATEP 513. Clinical Applications of Human Gross Anatomy 4.00

ATEP 524. General Medicine for the Athletic Trainer Part I 3.00

ATEP 646. Therapeutic Interventions III 3.00

Total: 72-73 Credit Hours

Clinical Courses

ATEP 521. Clinical I: Psychosocial Concepts and Cultural Sensitivity 3.00

ATEP 532. Clinical II: Nutrition & Exercise 3.00

ATEP 653. Clinical III: Professional Development 10.00-11.00

ATEP 664. Clinical IV: Transition to Practice 8.00

Total: 24-25 Credit Hours

Therapeutic Courses

ATEP 526. Therapeutic Interventions I 4.00

ATEP 536. Therapeutic Interventions II 4.00

ATEP 646. Therapeutic Interventions III 3.00

Total: 11 Credit Hours

ATEP 532. Clinical II: Nutrition & Exercise 3.00

Total: 39 Credit Hours

Second Year

Summer Semester: 6 Credit Hours

ATEP 537. Evidence Based Practice in Athletic Training 3.00

ATEP 660. Administration in Athletic Training 3.00

Fall Semester: 13-14 Credit Hours

ATEP 653. Clinical III: Professional Development 10.00-11.00

ATEP 534. General Medicine for the Athletic Trainer Part II 3.00

Spring Semester: 14 Credit Hours

ATEP 657. Applications in Evidence Based Practice 3.00

ATEP 645. Hip, Pelvis and Spine Orthopedic Examination and Rehabilitation 3.00

ATEP 664. Clinical IV: Transition to Practice 8.00

Total: 33-34 Credit Hours

Biology, Master of Science, M.S.

Interim Academic Unit Head

Dr. Sam Prins

Phone: (540) 568-2322

Website: <http://www.jmu.edu/biology/graduate/index.shtml>

Graduate Program Director

Dr. Janet Daniel

Professors

C. Bauerle, K. Caran, L. S. Eaton, M. Gabriele, H. Griscom, C. Lantz, S. Leslie, C. McMullen, J. Monroe, J. Mott, M. Renfro, C. Rose, K. Seifert, B. Wiggins, G. Wyngaard, R. Wunderlich

Associate Professors

S. Babcock, M. Bechtel, T. Bloss, J. Brown, C. Cleland, W. Cocking, K. Cresawn, S. Cresawn, J. Daniel, K. Gobetz, S. Halsell, J. Herrick, R. Lawler, C. May, T. Rife, K. Slekar

Assistant Professors

I. Cooper, R. Enke, J. Harsh, K. Kubow, P. Ludwig, D. McLeod, D. Moseley, M. R. Parker, K. Roth, M. Schmitt-Harsh, M. Steffen, D. Strong, P. Vasudevan, B. Velayudhan, G. Vidal, M. Walker, L. Wurch

Instructors

E. Doyle, W. Flint, O. Hyman, T. Hynd, A. Pesce

Admission Criteria

Prospective graduate students for the Master of Science degree should have completed an undergraduate major consisting of a minimum of 20 credit hours in biology, including courses covering the areas of organismal biology, cell and molecular biology, ecology, evolution and genetics. A student may be admitted with deficiencies in one or more of these areas but should be aware that the Graduate Advisory Committee may require the student to make up deficiencies with no credit toward the master's degree. The applicant should have completed a minimum of a year (two semesters) of general chemistry and one semester of organic chemistry. A course in general physics is strongly recommended, especially for those students interested in physiology.

Certain areas of study may require additional background in biochemistry, statistics, calculus or computer programming.

After making contact with potential advisers, students are required to submit with their application the Graduate Record Examination General Test scores, three letters of recommendation from individuals who know the student's scientific potential, and a statement of professional goals and interests.

Students typically matriculate only in the fall semester. Review of applications begins February 1 and continues until all positions are filled.

Mission

The Department of Biology Masters of Science Program is committed to providing a strong and unique training plan for advanced students of the discipline that will prepare them well for their future career goals. The program takes advantage of the current strengths of the department, basic scientific research and excellent biology pedagogy. Students will develop their intellectual potential by pursuing advanced course work in biology and by successfully completing a research thesis. They will have the option to develop their teaching skills by participating in mentored teaching.

Program Description

The biology graduate program is a thesis/research concentration for students who wish to continue the study of biology as a scholarly pursuit and who later continue work toward the Ph.D., work for industry or government, or wish to teach, primarily in two year colleges. The primary objective of the program is to enrich the student's subject knowledge and give the student a rigorous experience in research and thesis-writing. Students can also acquire training and experience in teaching. Training in teaching is provided through courses and the mentored teaching of biology laboratories. Thus, students not only gain research experience, they also learn to be effective teachers and communicators.

Currently, the biology department has research strengths in the following areas:

- Cell Biology and Genetics
- Comparative and Functional Morphology
- Developmental Biology
- Ecology, Evolution, Behavior and Systematics
- Genomics
- Microbiology
- Neurobiology
- Plant Biology

More information regarding faculty research can be found Department of Biology website at <http://www.jmu.edu/biology/graduate/index.shtml>.

Minimum Requirements

BIO 700. Thesis Research 1.00 - 6.00 6 credit hours

Electives (15 credits must be at the 600- or 700-level, including BIO 700) 24 Credit Hours

Total: 30 Credit Hours

Additional Requirements

Students wishing to receive training and mentoring in teaching and who wish to teach biology laboratories are also required to take BIO 600. Effective Teaching I (2 credits), BIO 601. Mentored Teaching (1 credit) and BIO 602. Effective Scientific Communication (2 credits). These courses are strongly recommended for all students. Exemptions require approval of the student's advisory committee.

All students must have their individual program of study approved by the student's Thesis Advisory Committee and the head of the academic unit.

Up to nine hours of graduate credit from accredited institutions may be accepted toward the Master of Science degree, subject to the general regulations and procedures of The Graduate School regarding transfer credit.

Full-time biology graduate students are required to attend and participate in the biology departmental seminars while in residence.

Note on Course Offerings

For a student to enroll in any biology graduate course the department assumes the student meets minimal course requirements for entrance into the Master of Science degree program in biology. Permission of the instructor is required if this is not the case.

Master of Business Administration, M.B.A.

Graduate Director

Dr. Matt Rutherford, Faculty Director

Phone: (540) 568-3058

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

Email: mba@jmu.edu

Accounting Program

Professor

D. Fordham

Associate Professor

S. Cereola

Economics Program

Professors

W. Grant, W. Wood

Associate Professors

V. Bhatt, A. Neveu

Finance and Business Law Program

Professors

J. Fink, Q. Liu

Associate Professor

E. Semaan, C. Ullrich

Computer Information Systems and Business Analytics

Professors

M. Busing, D. Lending, I. Markham, R. Pal

Associate Professors

C. Guo

Management Program

Professors

R. Kolodinsky, M. Rutherford

Associate Professors

L. Leduc, F. Mousa, M. Pattie, E. Stark

Assistant Professors

D. Cavazos, A. Heavey, D. Peterson

Marketing Program

Professors

I. Clarke, T. Clarke

Associate Professor

M. Tokman

Master of Business Administration Program

Adjunct Graduate Faculty

H. Bromley, H. Fielden, D. Gallagher, M. House, J. Lantzy, B. O'Roark

Admission Criteria

The GMAT or GRE is required unless the applicant holds another master's level degree or advanced degree (e.g., M.D., Pharm.D.), a CPA, or a GMAT waiver has been issued. These instruments measure aptitudes important to the study of business and must be taken prior to admission. Applicants are required to have at least two years of post-baccalaureate work experience prior to pursuing Innovation or Information Security concentrations, and a minimum of five years of post-baccalaureate work experience prior to pursuing the Executive Leadership concentration.

To apply, students should complete the online application and submit the application fee at <http://www.applyweb.com/apply/jmug/index.html>. In addition, students must submit a current resume and two letters supporting the work experience listed on the resume through the application site.

Students must also submit the following materials directly to The Graduate School (James Madison University, MSC 6702, Harrisonburg VA 22807):

Official transcripts sent directly from all colleges/universities you have attended.

- An official report sent directly from GMAC of the applicant's GMAT score or from ETS of the applicant's GRE score.
- The university encourages applicants with degrees in all major fields of study from accredited institutions. No specific undergraduate courses are required; however, students with non-business baccalaureates are required to complete the following three prerequisite courses:
 - Financial Accounting
 - Statistics
 - Economics (Microeconomics is preferred; Macroeconomics is acceptable)
- Students must notify the M.B.A. program office upon completion of each prerequisite course and have official transcripts submitted to The Graduate School directly from the institution where the course was completed. Students may begin the program only during the fall semester.

The final deadline for an application is July 1. However, a rolling admission process is used. All applications submitted by April 15 will be considered. Applications after April 15 will be considered only if the program has an opening.

Mission

The M.B.A. program within the College of Business at James Madison University emphasizes excellence and continuous improvement in graduate learning by stressing knowledge and technical, interpersonal and experiential skills in the development of managerial decision-making.

The Master of Business Administration program is fully accredited by the AACSB and received reaffirmation in the spring of 2017.

The College of Business offers three specialized Master of Business Administration concentrations. All three concentrations are designed for part-time students and utilize a blended teaching approach that integrates the classroom experience with various online techniques.

The Executive Leadership concentration is offered in northern Virginia and takes 28 months to complete. A cohort of students takes fourteen 8-week courses, one course at a time. Each course meets face-to-face for four hours at the beginning, four hours at mid-term and four hours at the end of the session on a Saturday. Instruction between face-to-face sessions is online, using synchronous and asynchronous teaching methods.

The Information Security (Infosec) MBA concentration is offered in northern Virginia and takes 28 months to complete. A cohort of students takes fourteen 8-week courses, one course at a time. Each course meets for four hours at the beginning and at the end of the session on a Saturday. Instruction for the eight weeks between the face-to-face meetings is online, using synchronous and asynchronous teaching methods.

The Innovation MBA concentration is offered in Harrisonburg and takes 21 months to complete. A cohort of students takes sixteen 8-week courses, two at a time in a block format. In this program, students will meet face-to-face with faculty approximately twice every 3 weeks in Harrisonburg during a weeknight, meet online in a synchronous format the other weeks, and utilize other advanced asynchronous teaching instruction, such as simulations or multimedia cases.

Additional Information

MBA 691 Strategic Management is considered the capstone course in the executive leadership M.B.A. concentration and replaces the comprehensive examination requirement. A grade of "B" or better must be attained to pass MBA 691

Executive Leadership MBA Concentration

The Executive Leadership Master of Business Administration is designed around the theme of "Leading Through Change." The concentration is intended for high performing individuals who have potential for organizational leadership and who will likely hold C-Suite positions. The Executive Leadership MBA is designed to develop skills and abilities required to effectively and ethically lead in dynamic and highly competitive business settings. In addition to addressing the critically important issues in all functional business disciplines, this program has a particular emphasis on accelerating participant skill sets in crisis management, global competitive issues, supply chain challenges, stakeholder

leadership, and in understanding, leading, and creating change across the organization. Emphasizing both in-class and experiential activities, learning takes place face-to-face as well as synchronously, using the latest online technologies.

Core Curriculum (5 courses): 15 Credit Hours

MBA 613. Foundations of Marketing Leadership *3.00*

MBA 615. Supply Chain Management and Logistics *3.00*

MBA 617. Corporate Financial Decision-Making *3.00*

MBA 618. Information Systems Strategy and Leadership *3.00*

MBA 691. Strategic Management *3.00*

Executive Leadership Curriculum (9 courses): 27 Credit Hours

MBA 606. Managing in an Innovation-Driven Global Environment *3.00*

MBA 608. Interpersonal Leadership and Managing Organizational Behavior *3.00*

MBA 609. Leadership Skills Accelerator *3.00*

MBA 614. Cultivating Global Business Leadership *3.00*

MBA 616. Financial Statement Analysis and Reporting *3.00*

MBA 621. Leading Through Big Data Analytics *3.00*

MBA 622. Managing Risk in Global Financial Markets *3.00*

MBA 653. Business Law *3.00*

Choose one of the following:

MBA 610. Statistical Analysis for Decision Making *3.00*

MBA 654. Investments Analysis *3.00*

MBA 695. Cultural Awareness Experience *3.00*

Total: 42 Credit Hours

Business Administration, M.B.A., Information Security Concentration

Advances in information technologies, the globalization of markets, and increased rate of technological change have changed the competitive dynamics in many industries. The management of knowledge and information is a critical source of competitive advantage for firms. To sustain success, firms must protect their information and knowledge-based resources. Thus, the Information Security MBA concentration is designed to provide students with a sound foundation in all of the business principles, while also ensuring they have a strong understanding of the business implications of information security.

The program is primarily intended for working professionals holding full-time positions. While this program is primarily an online program utilizing synchronous and asynchronous techniques, students meet with faculty once every eight weeks on a Saturday in northern Virginia.

The curriculum of the Information Security MBA concentration includes the fourteen courses listed below. A cohort of students takes all courses listed below, with one course being completed every eight weeks. The program includes 42 total credit hours.

Core Curriculum (5 courses): 15 Credit Hours

MBA 613. Foundations of Marketing Leadership *3.00*

MBA 615. Supply Chain Management and Logistics *3.00*

MBA 617. Corporate Financial Decision-Making *3.00*

MBA 618. Information Systems Strategy and Leadership *3.00*

MBA 691. Strategic Management *3.00*

Concentration Courses (5 courses): 15 Credit Hours

MBA 600. Organizational Behavior *3.00*

MBA 610. Statistical Analysis for Decision Making *3.00*

MBA 620. Accounting for Decision-Making and Control *3.00*

MBA 641. The Microeconomics of Business Decision-Making *3.00*

Choose one of the following:

MBA 654. Investments Analysis *3.00*

MBA 695. Cultural Awareness Experience *3.00*

Security Courses (4 courses): 12 Credit Hours

MBA 680. Introduction to Information Security *3.00*

MBA 681. Managing System Networks *3.00*

MBA 682. Managerial Computer Forensics *3.00*

MBA 685. Information Security Ethics and Policy *3.00*

Total: 42 Credit Hours

Business Administration, M.B.A., Innovation Concentration

Innovation is a critical component of sustainable firm success in today's complex, global and dynamic business environment. Managers need to understand the technical and human components of innovation and be able to be leaders of the innovation process. Thus, the theme of this program is "Leading through Innovation with Technology and People." The program is designed to provide students with a sound foundation in all of the business principles, while focusing on the various aspects of innovation. The program also emphasizes the development of teamwork, managerial decision-making and leadership skills.

The program is primarily intended for working professionals holding full-time positions in the Shenandoah Valley of Virginia and other nearby regions.

The curriculum of the Innovation MBA concentration includes the 16 courses listed below. The program includes 48 total credit hours.

Core Curriculum (5 courses): 15 Credit Hours

MBA 613. Foundations of Marketing Leadership *3.00*

MBA 615. Supply Chain Management and Logistics *3.00*

MBA 617. Corporate Financial Decision-Making *3.00*

MBA 618. Information Systems Strategy and Leadership *3.00*

MBA 691. Strategic Management *3.00*

Leadership Values (2 courses): 6 Credit Hours

MBA 600. Organizational Behavior *3.00*

MBA 667. Analytical Decision-Making for the Ethical Manager *3.00*

Innovation Theme (3 courses): 9 Credit Hours

MBA 601. Management of Innovation and Technology *3.00*

MBA 611. Project Management *3.00*

MBA 620. Accounting for Decision-Making and Control *3.00*

Electives (choose six from the following): 18 Credit Hours

MBA 602. Management of New Product Development *3.00*

MBA 605. Entrepreneurship and Venture Creation *3.00*

MBA 606. Managing in an Innovation-Driven Global Environment *3.00*

MBA 607. Leadership Communication Skills for Business *3.00*

MBA 625. Online Search Advertising *3.00*

MBA 650. Managing Human Resources *3.00*

MBA 653. Business Law *3.00*

MBA 654. Investments Analysis *3.00*

MBA 656. Business Process Management *3.00*

MBA 658. Financial Risk Analysis and Management *3.00*

MBA 664. Negotiations and Conflict Management *3.00*

MBA 678. Special Topics *3.00*

MBA 695. Cultural Awareness Experience *3.00*

Total: 48 Credit Hours

Additional Information

One course from another master's program at JMU may be substituted for an elective if the course is related to the theme of the program, and with prior approval from the director of the MBA program.

MBA 691. Strategic Management is the capstone course in the M.B.A. Innovation concentration and replaces the comprehensive examination requirement. A minimum grade of "B" or better must be attained to pass MBA 691.

Students are also required to participate in the following:

Workshops: Students are required to attend three Saturday workshops. The first will be an orientation workshop that will teach students how to use the technology needed to participate in the online activities and introduce the students to the leadership development program. There will also be two special topics workshops in the spring of each year that will have guest speakers debate contemporary business issues and will have students participate in a variety of group activities.

Communication and Advocacy, M.A.

Communication and Advocacy

Academic Unit Head

Dr. Eric Fife

Phone: (540) 568-6228

Website: <http://www.jmu.edu/commstudies/ma/index.shtml>

Graduate Program Director

Dr. Corey Hickerson

Professors

C. Alemán, M. Alemán, P. Bsumek, E. Fife, C. Hickerson, S. Mazzarella, L. Nelson, S. Opt, T. Whitfield

Associate Professors

T. Ball, A. Bodkin, L. Britt, L. Harvell-Bowman, L. Kristiansen, S. Richards, D. Schill, C. Woo

Assistant Professors

M. Brigham, M. Broderick, M. Davis, K. Hobson, Y. Kim, S. Meganck, J. Peeks Mease, J. Rosier

Instructors

J. Briscoe, C. Saindon

Lecturer

A. Noland

Admission Requirements

In order to be considered for admission to the graduate program in Communication and Advocacy in the School of Communication Studies, applicants must demonstrate:

- Graduation from a regionally accredited college or university.
- Satisfactory grade point average in their undergraduate course work.
- Proficiency in writing, research and analytical skills demonstrated through research methods coursework in communication or a related field, or a writing sample.

The School of Communication Studies requires that all prospective applicants submit the following materials:

- Official transcripts of all colleges and universities attended
- A written statement of educational professional goals (500 words)
- A resume or curriculum vitae
- Two letters of recommendation from professors, employers, and other professionals qualified to judge the applicants ability to successfully complete a graduate program. Recommendations for those applying for Graduate Assistantships should also address the applicant's potential for teaching.
- A prompted essay (500-750 words)

Students may apply online to The Graduate School and apply for assistantships through the process described on the graduate program website. Applications are reviewed beginning February 15.

Mission

The School of Communication Studies promotes an academic environment in which students, faculty and staff develop innovative communication practices and facilitate constructive dialogue in the classroom and community to inspire responsible citizenship in a diverse world. We are committed to the teaching of communication theory and criticism, the development of communication and advocacy skills, the research of communication processes and practices, and the application of generated knowledge about human communication toward the betterment of self and community.

Accordingly, members of the School of Communication Studies strive to create a learning environment whereby:

Individuals are academically well-rounded, diverse in experience and reflective in their methods, research, and skill sets for approaching communication;

Scholarship is communication focused, but interdisciplinary in approach, and produces meaningful dialogue within our academic disciplines and communities;

Professional service, outreach to communities, and advocacy for human betterment is valued by and from each individual.

Curriculum

The Master of Arts in Communication and Advocacy is a 36-credit hour program that includes: 18 hours of core course work in advocacy studies, theory and applied contexts, and communication research methods:

- Nine hours of concentrated study in advocacy topics salient in both academic and professional contexts, such as health and environmental communication^[1]
- Nine hours dedicated to a major project option of thesis or internship credit designed to facilitate specific vocational and academic qualifications in the field. Includes three hours of elective course work

or

- Nine hours related to the comprehensive examination

The core spans applied theory and contexts as well as research methods and tools. It is designed to prepare students to systematically examine, assess, critique and develop communication advocacy practices across a wide range of areas. The additional requirements and electives allow students to develop competencies in specific areas of advocacy studies.

Master of Arts in Communication and Advocacy Requirements

All students must pass a comprehensive assessment to fulfill the completion requirement for the program. For students choosing the major project option, the assessment will take the form of an oral defense of their thesis or internship project. The student's thesis or internship committee will assess the defense of the major project. For students selecting the comprehensive examination option, the examination will take the form of a timed, written examination administered and assessed by the Graduate Program Committee.

The number of elective credits required is dependent on the choice of completion requirement. Students that choose to complete an internship or thesis will complete three credits of elective courses. Students that choose the comprehensive exam option will complete nine hours of elective courses.

Concentrations

Environmental Communication Concentration

Graduate students interested in specializing in environmental communication will complete course work focusing on the multifaceted nature of environmental advocacy, key forums through which competing local to international interests are identified, contested, and managed, as well as how various levels of risk are framed, challenged, and negotiated. Students graduating with a concentration in environmental communication will be prepared to work in a variety of nonprofit, government and corporate settings constructing and evaluating

environmental campaigns, facilitating organizational and group decision making about issues related to environmental practices, communicating effectively with varied stakeholders with conflicting interests, and educating and motivating diverse audiences regarding environmental interests.

Introduction to the Program: 3 Credit Hours

SCOM 500. Introduction to Advocacy Studies 3.00

Theory and Applied Contexts: 3 Credit Hours

SCOM 540. Seminar in Communication Theory 3.00

Choose two of the following: 6 Credit Hours

SCOM 541. Seminar in Rhetorical Theory 3.00

SCOM 542. Seminar in Critical Theory and Communication 3.00

SCOM 600. Advocacy Processes and Techniques 3.00

SCOM 625. Interpersonal Communication as Advocacy 3.00

SCOM 627. Facilitating Collaborative Governance and Public Problems 3.00

SCOM 650. Applied Organizational Communication 3.00

SCOM 660. Seminar in Risk and Crisis Communication 3.00

SCOM 665. Special Topics in Communication Theory and Applied Contexts 3.00

SCOM 680. Readings & Research 3.00

SCOM 695. Fieldwork in Communication and Advocacy 3.00

Research Methods and Tools

Choose two of the following: 6 Credit Hours

SCOM 580. Seminar in Communication Research Methods 3.00

SCOM 681. Seminar in Rhetoric and Criticism 3.00

SCOM 683. Seminar in Quantitative Communication Research Methods 3.00

Health Communication Concentration

Graduate students interested in specializing in advocacy in the context of Health Communication will complete course work across a wide range of health care situations. Students graduating with a concentration in health communication will be prepared to work in a variety of non-profit, government and corporate settings constructing and evaluating health-related messages and campaigns, educating audiences using culturally appropriate messages designed to reach diverse groups, and advocating for patients and clients in a variety of health care contexts.

Introduction to the Program: 3 Credit Hours

SCOM 500. Introduction to Advocacy Studies 3.00

Theory and Applied Contexts: 3 Credit Hours

SCOM 540. Seminar in Communication Theory 3.00

Choose two of the following: 6 Credit Hours

SCOM 541. Seminar in Rhetorical Theory 3.00

SCOM 542. Seminar in Critical Theory and Communication 3.00

SCOM 600. Advocacy Processes and Techniques 3.00

SCOM 625. Interpersonal Communication as Advocacy 3.00

SCOM 627. Facilitating Collaborative Governance and Public Problems 3.00

SCOM 650. Applied Organizational Communication 3.00

SCOM 660. Seminar in Risk and Crisis Communication 3.00

SCOM 665. Special Topics in Communication Theory and Applied Contexts 3.00

SCOM 680. Readings & Research 3.00

SCOM 695. Fieldwork in Communication and Advocacy 3.00

Research Methods and Tools

Choose two of the following: 6 Credit Hours

SCOM 580. Seminar in Communication Research Methods 3.00

SCOM 681. Seminar in Rhetoric and Criticism 3.00

SCOM 683. Seminar in Quantitative Communication Research Methods 3.00

Strategic Communication Concentration

Graduate students interested in specializing in strategic communication will complete course work focused on the research-driven, analytical approach utilized by contemporary advocates used to address communication challenges and opportunities in the public and private sector.

Students with a concentration in strategic communication will be prepared to work in a variety of corporate, governmental and nonprofit settings constructing and evaluating communication campaigns, facilitating organizational and group decision making, engaging effectively with interested stakeholders, and educating and motivating diverse audiences.

Introduction to the Program: 3 Credit Hours

SCOM 500. Introduction to Advocacy Studies 3.00

Theory and Applied Contexts: 3 Credit Hours

SCOM 540. Seminar in Communication Theory 3.00

Choose two of the following: 6 Credit Hours

SCOM 541. Seminar in Rhetorical Theory 3.00

SCOM 542. Seminar in Critical Theory and Communication 3.00

SCOM 600. Advocacy Processes and Techniques 3.00

SCOM 625. Interpersonal Communication as Advocacy 3.00

SCOM 627. Facilitating Collaborative Governance and Public Problems 3.00

SCOM 650. Applied Organizational Communication 3.00

SCOM 660. Seminar in Risk and Crisis Communication 3.00

SCOM 665. Special Topics in Communication Theory and Applied Contexts 3.00

SCOM 685. Seminar in Qualitative Research Methods 3.00

Concentration

Choose three of the following: 9 Credit Hours

SCOM 651. Environmental Decision Making: Conflict, Advocacy and Participatory Processes 3.00

SCOM 652. Environmental Justice: Advocacy and Perspectives 3.00

SCOM 653. Critical Perspectives: Environment, Advocacy, and Public Culture 3.00

SCOM 654. Environmental Campaign Advocacy and Social Influence 3.00

SCOM 655. Special Topics in Environmental Communication 3.00

Elective Requirement

Elective: 3-9 Credit Hours

Select an elective course(s) from core courses, another concentration or from another program that assists in the development of the student's professional goals. Courses cannot fulfill more than one requirement. The number of electives is dependent on the choice of completion requirement.

Completion Requirements

Choose one of the following 0-6 Credit Hours

SCOM 700. Communication Studies Thesis 3.00 - 6.00

SCOM 701. Communication Studies Internship 3.00 - 6.00

Comprehensive Examination (0 credits)

SCOM 685. Seminar in Qualitative Research Methods 3.00

Concentrations

Choose three of the following: 9 Credit Hours

SCOM 670. Health Communication Advocacy & Social Influence: Campaign Development and Delivery 3.00

SCOM 671. Intercultural Health Communication Advocacy 3.00

SCOM 673. Communication, Advocacy and Health Organizations 3.00

SCOM 674. Patient-Provider Communication and Advocacy 3.00

SCOM 675. Special Topics in Health Communication 3.00

Elective Requirement

Elective: 3-9 Credit Hours

Select an elective course(s) from core courses, another concentration or from another program that assists in the development of the student's professional goals. Courses cannot fulfill more than one requirement. The number of electives is dependent on the choice of completion requirement.

Completion Requirements

Choose one of the following 0-6 Credit Hours

SCOM 700. Communication Studies Thesis 3.00 - 6.00

SCOM 701. Communication Studies Internship 3.00 - 6.00

Comprehensive Examination (0 credits)

SCOM 680. Readings & Research 3.00

SCOM 695. Fieldwork in Communication and Advocacy 3.00

Research Methods and Tools

Choose two of the following: 6 Credit Hours

SCOM 580. Seminar in Communication Research Methods 3.00

SCOM 681. Seminar in Rhetoric and Criticism 3.00

SCOM 683. Seminar in Quantitative Communication Research Methods 3.00

SCOM 685. Seminar in Qualitative Research Methods 3.00

Concentrations

SCOM 610. Strategic Communication 3.00

SCOM 611. Public Policy, Communication and Governmental Advocacy 3.00

SCOM 612. Stakeholder Engagement 3.00

SCOM 613. Strategic Communication Campaigns 3.00

SCOM 615. Special Topics in Strategic Communication 3.00

Elective Requirement

Elective: 3-9 Credit Hours

Select an elective course(s) from core courses, another concentration or from another program that assists in the development of the student's professional goals.

Courses cannot fulfill more than one requirement. The number of electives is dependent on the choice of completion requirement.

Completion Requirements

Choose one of the following 0-6 Credit Hours

SCOM 700. Communication Studies Thesis 3.00 - 6.00

SCOM 701. Communication Studies Internship 3.00 - 6.00

Comprehensive Examination (0 credits)

Communications Sciences and Disorders

Academic Unit Head

Dr. Cynthia R. O'Donoghue

Phone: (540) 568-6440

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

Graduate Program Directors

Dr. Ayasakanta Rout, Doctor of Audiology (Au.D.), Dual Au.D./Ph.D.

Dr. Carol C. Dudding, Master of Science (M.S.) in Speech-Language Pathology (Clinical) Combined M.S./Ph.D.

Dr. Rory DePaolis, Doctor of Philosophy (Ph.D.) in Communication Sciences and Disorders, Post-Au.D. Ph.D.

Master of Science (M.S.) in Communication Sciences and Disorders (Research), Dr. GERALYN R. TIMLER

Master of Science (M.S.) in Speech-Language Pathology (Residential Program), JMU Coordinator, Erin Clinard, M.S., CCC-SLP DLVE-SLP-Distance Learning in VA Educating Speech Language Pathologists

Professors

R. DePaolis, L. Gray, C. O'Donoghue, J. Spindel

Associate Professors

C. Clinard, C. Dudding, S. Pavelko, A. Rout, G. Timler

Assistant Professors

S. Ingram, E. Kamarunas, C. Kuo, J. Lee, M. Longerbeam, Y. Nie, E. Piker

Admission Criteria

Specific admission requirements and pre-requisite course work for individual programs are listed with each program description. Applications will be reviewed in accordance with slots that may be available. Using the submitted material, the department admissions committee will rank eligible candidates for a limited number of admissions.

Students applying for admission to either the M.S. program in Speech-Language Pathology or the Au.D. program should be aware that some of the clinical placement sites in which students are required to complete clinical practica in order to graduate will require the student to produce a current criminal records check. It is the student's responsibility to arrange for the check, to keep it current in order to comply with the requirements of the various clinical sites, and to advise the university and department if the status of the student's criminal record changes at any time during the student's program.

Mission

The Department of Communication Sciences and Disorders is committed to providing 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 provides graduate-level course work and practicum experiences for those interested in entering professional practice in either speech-language pathology or audiology, university teaching and research positions, or management/administrative positions 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. The Department's Speech-Language-Hearing Clinic provides outreach services to the region as part of the clinical teaching component of its mission and provides a clinical research resource for students and faculty.

The audiology and speech-language pathology clinical training graduate programs in the Department of Communication Sciences and Disorders are accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association.

Speech-Language-Hearing Clinic

The JMU Speech-Language-Hearing Clinic, operated by the Department of Communication Sciences and Disorders, provides evaluation and clinical intervention services for individuals with speech, language and hearing problems. The priority for services offered through this clinic is determined by the needs of practicum students. Appointments for a consultation or evaluation may be made by any member of the general public or university community. Professional services are provided by expert certified speech-language pathologists and audiologists who supervise the practicum of students.

Financial Aid

Graduate assistantships are available on a competitive basis to graduate students. In addition, fellowships funded by the Scottish Rite Foundation of Virginia are available to graduate students admitted to the graduate program with the concentration in speech-language pathology. Scottish Rite Fellowships are restricted to Virginia residents who intend to pursue positions working with children who have speech and language impairments in the state of Virginia. Contact the graduate director in the department for information.

The Department of Communication Sciences and Disorders offers two concentrations in the Master of Science program. One is the Master of Science in Speech-Language Pathology. This is a clinical concentration designed to prepare individuals to practice as speech-language pathologists. The second is the Master of Science in Communication Sciences and Disorders. It is a non-clinical concentration designed for individuals who seek concentrated study in one or more areas of human communication sciences and/or communication disorders without clinical preparation as audiologists or speech-language pathologists.

Because this concentration provides the opportunity for more in-depth study in selected concentrations and involves students in active participation in research, it is one avenue to lay a solid foundation in communication sciences and disorders research, particularly for those individuals wanting to pursue further study at the Ph.D. level but not interested in the clinical credentials.

M.S. in Communication Sciences and Disorders (Research)

The master's degree program in communication sciences and disorders is a non-clinical program that combines concentrated study in selected areas of human communication sciences and/or communication disorders and active research participation and research training. For individuals who wish to pursue further study at the Ph.D. level, the program offers a solid foundation in communication sciences and disorders research. Students select one area (Category C course work) from among four possible areas and complete the course work in that area in addition to the course work in the three other categories (A, B and D), as indicated below, for a total of a minimum of 36 credit hours. Completion of a thesis and participation in directed research experiences are essential parts of the program.

Admission Requirements

- Completion of a bachelor's degree with a minimum 3.25 grade point average in major course work.
- General GRE scores (verbal, quantitative and writing).
- Three letters of recommendation on letterhead stationery.
- Personal written statement regarding career goals, reasons for pursuing a research degree and areas of research interest.

Communication Sciences and Disorders, M.S.

Required Courses

Category A: Research Design and Statistics: 9 Credit Hours (minimum)

CSD 500. Research in Communication Sciences and Disorders 2.00 or CSD 600. Research in Audiology 3.00

Choose, in conjunction with major adviser, at least 6 credits from the following:

PSYC 600. Introduction to Measurement and Statistics 3.00

PSYC 604. Computer-Assisted Data Management and Analysis 3.00

PSYC 608. Multivariate Statistical Methods in Psychology 3.00

PSYC 609. Applied Research Methods 3.00

PSYC 840. Qualitative Research Design and Analysis 3.00

Category B: Speech/Hearing Sciences and Instrumentation: 6 Credit Hours (minimum)

Choose, in conjunction with major adviser, at least 6 credits from the following:

CSD 511. Instrumentation in Audiology 3.00

CSD 512. Anatomy and Physiology of the Auditory and Vestibular Systems 3.00

CSD 513. Anatomy and Physiology of the Central Auditory Pathway 2.00

CSD 523. Psychoacoustics 3.00

CSD 604. Neuroanatomy and Neurophysiology of Speech & Language 3.00¹

CSD 605. Physiological and Acoustical Phonetics 3.00¹

Footnote

¹ These courses cannot be used to complete requirements in more than one category of study.

Category C: Areas of Concentration (Complete one area): 9 Credit Hours (minimum)

Area 1. Adult Neurogenic Communication Impairment

CSD 718. Independent Study 1.00 - 3.00

Choose at least 6 credits, as approved by major adviser, from the following:

CSD 515. Human Communication and Aural Rehabilitation 3.00

CSD 522. Communication Disorders of the Traumatically Brain Injured 2.00

CSD 527. Aging and Communication 1.00

CSD 544. Evaluation and Treatment of Swallowing Disorders 3.00

CSD 560. Neuromotor Speech Disorders 3.00

CSD 641. Language Disorders in Adults 3.00

CSD 710. Seminar in Audiology (Geriatric Audiology) 1.00

Area 2. Pediatric Communication Impairment

CSD 718. Independent Study 1.00 - 3.00

Choose at least 6 credits, as approved by major adviser, from the following:

CSD 515. Human Communication and Aural Rehabilitation 3.00

CSD 528. Autism 1.00

CSD 529. Augmentative Communication 1.00

CSD 530. Early Intervention 1.00

CSD 623. Pediatric Speech Sound Disorders 3.00

CSD 625. Pediatric Dysphagia 1.00

CSD 640. Advanced Children's Language Disorders 3.00

Area 3. Speech Production Disorders

CSD 718. Independent Study 1.00 - 3.00

Complete at least 6 credits, as approved by major adviser, from the following:

CSD 560. Neuromotor Speech Disorders 3.00

CSD 604. Neuroanatomy and Neurophysiology of Speech & Language 3.00¹

CSD 605. Physiological and Acoustical Phonetics 3.00¹

CSD 656. Voice Disorders 2.00

Footnote

¹ These courses cannot be used to complete requirements in more than one category of study.

Area 4. Hearing and Hearing Disorders

CSD 718. Independent Study 1.00 - 3.00

Complete at least 6 credits, as approved by major adviser, from the following:

CSD 512. Anatomy and Physiology of the Auditory and Vestibular Systems 3.00

CSD 513. Anatomy and Physiology of the Central Auditory Pathway 2.00

CSD 516. Vestibular Physiology and Testing 3.00

CSD 523. Psychoacoustics 3.00

CSD 611. Neurophysiologic Measures I 4.00 - 5.00

CSD 621. Neurophysiologic Measures II 4.00

CSD 633. Auditory Pathophysiology 3.00

Category D: Research and Thesis: 12 Credit Hours (minimum)

CSD 717. Directed Research 1.00 - 3.00

CSD 791. Directed Research 1.00

CSD 817. Directed Research 1.00 - 3.00

CSD 917. Directed Research 1.00 - 3.00

CSD 700. Thesis Research 1.00 - 6.00

Total: 36 Credit Hours (minimum)

Computer Science, M.S.

Department Head

Dr. Sharon Simmons

Phone: (540) 568-8772

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

Graduate Program Directors

Dr. Florian Buchholz, Digital Forensics Concentration

Dr. M. Hossain Heydari, Information Security Concentration

Professors

D. Bernstein, C. Fox, S. Frysinger, M. H. Heydari, R. Mata-Toledo, S. Simmons, B. Tjaden, X. Wang

Associate Professors

M. Aboutabl, F. Buchholz, M. Kirkpatrick, C. Mayfield, M. Norton, N. Sprague

Assistant Professors

J. Bowers, M. Lam

Admission Criteria

Admission to the program is competitive. Preference is given to students with undergraduate preparation in computer science or professional experience in computing. Strong students from other disciplines are also encouraged to apply. Students judged able to complete the program but lacking background in computing can be admitted with a conditional requirement to complete a preparatory course sequence in computer science. The Master of Science program in computer science is not currently accepting students for its concentration in digital forensics and its five-year concentration in digital forensics.

Mission

The graduate program in computer science prepares highly skilled professionals with advanced expertise in creating and maintaining secure and reliable computing systems. Two different concentrations are available: information security and digital forensics. Both concentrations lead to the M.S. degree in computer science and include courses in core areas of computer science.

Digital Forensics

Our program offers quality education in digital forensics from a computer science perspective through a systems-oriented curriculum that provides the skills and knowledge needed to support digital investigations. The curriculum is highly system-oriented, where students gain deep insights into how operating systems, networks and computer programs function and how those systems relate to forensics and security in general.

Director: Dr. Florian Buchholz

The digital forensics concentration combines core computer science concepts with an in-depth, technical study of digital forensics. The curriculum is highly system-oriented, where students gain deep insights into how operating systems, networks and computer programs function and how those systems relate to forensics and security in general. Coupled with these technical computer science topics, a core digital forensics component addresses the forensic process, relevant laws and analysis techniques, as well as report writing. Students with exceptional undergraduate preparation may choose electives in place of selected required courses with prior approval of the concentration director. For electives, students may also choose independent studies, reading and research courses, or special courses offered by faculty on topics of interest.

Students completing this concentration will also receive the Information Systems Security (INFOSEC) Professionals certificate (NSTISSI No. 4011).

This concentration is available on campus only.

Additional Information

These undergraduate courses are required for admission to this concentration:

CS 159. Advanced Computer Programming

CS 227/327. Discrete Structures I and II

CS 240. Algorithms and Data Structures

CS 345. Software Engineering

CS 361. Computer Systems II

CS 430. Programming Languages

A 400-level CS systems elective

The department strongly encourages that CS 452. Analysis of Algorithms be taken by undergraduates intending to apply for this concentration.

CS 457. Information Security should not be taken by undergraduates intending to apply for this concentration.

Digital Forensics Concentration Requirements

CS 531. Secure Programming 3.00

CS 550. Operating Systems 3.00

CS 552. Applied Complexity Theory 3.00

CS 557. Information Security 3.00

CS 610. Networking and Security 3.00

CS 630. Compiler Theory and Implementation 3.00

CS 633. Computer Forensics 3.00

CS 635. Secure Network Operations 3.00

CS 640. Malware Analysis 3.00

Approved elective 3 Credit Hours

Total: 30 Credit Hours

Thesis Route

CS 700. Thesis Research 2.00 - 3.00

Total: 36 Credit Hours

Non-Thesis Route

Approved electives 6 Credit Hours

Total: 36 Credit Hours

Five-Year Concentration in Digital Forensics

Director: Dr. Florian Buchholz

This concentration allows students to complete both a bachelor's degree and a master's degree in computer science in five years by combining the first year of graduate studies with the senior year of undergraduate studies. The curriculum requires 30 credit hours of graduate courses, of which 21 hours are required courses and nine hours are electives or thesis credit. Substitutions for required courses may be made with permission of the concentration director.

Students completing this concentration will also receive the Information Systems Security (INFOSEC) Professionals certificate (NSTISSI No. 4011).

Admission requirements include nine undergraduate CS courses that are normally taken by CS undergraduate majors and that may also be taken by JMU undergraduates who minor in CS, as an extension of regular minor requirements. Applicants must also be on track to have completed at least 99 credit hours by the end of junior year (ideally 105 credit hours). Course selection for the junior-senior years should be done in consultation with the concentration director.

In comparison to the traditional concentration in digital forensics, this concentration requires the same 600-level courses, and all but two of the same 500-level courses.

Five-Year Digital Forensics Concentration Requirements

CS 550. Operating Systems 3.00

CS 557. Information Security 3.00

CS 610. Networking and Security 3.00
 CS 630. Compiler Theory and Implementation 3.00
 CS 633. Computer Forensics 3.00
 CS 635. Secure Network Operations 3.00
 CS 640. Malware Analysis 3.00
 Approved elective 3 Credit Hours
Total: 24 Credit Hours

Thesis Route
 CS 700. Thesis Research 2.00 - 3.00
Total: 30 Credit Hours
Non-Thesis Route
 Approved electives 6 Credit Hours
Total: 30 Credit Hours

Information Security Concentration

We are committed to providing a premier information security education that equips graduates with the knowledge and skills necessary to design, implement and maintain secure modern information infrastructures and systems. InfoSec is a distance-education offering, completely Internet-based. Students can expect to finish their studies in two to two and one half years.

Director: Dr. M. Hossain Heydari

This concentration is offered in a remote, electronic distance-learning format that, while satisfying all requirements for the Master of Science program, is especially appropriate for people with professional interests in information security. Further information can be obtained from the InfoSec website. The distance-learning courses are available only to students in the information security concentration, who will pay a different tuition rate than students taking traditional courses at the university.

Certificate Courses

Eligible students may take certificate courses CS 502 - CS 506 to receive specific security certificates.

Students completing this concentration will also receive two NSA approved certificates: Information Systems Security (INFOSEC) Professionals (NSTISSI No. 4011) and Information Systems Security Officers (CNSSI No. 4014).

Preparatory Courses

Depending on undergraduate background and work experience, students may be required to take one or more of the following preparatory courses. These courses do not satisfy degree requirements for the information security concentration.

Courses

CS 510. Object Oriented Programming 3.00
 CS 511. Computer Organization 3.00
 CS 512. Data Structures 3.00
 CS 515. Foundations of Computer Science 3.00

Concentration Requirements

Minimum Requirements

CS 523. Ethics, Law and Policy in Cyberspace 3.00
 CS 531. Secure Programming 3.00
 CS 550. Operating Systems 3.00
 CS 559. Computer Security 3.00
 CS 610. Networking and Security 3.00
 CS 627. Cryptography: Algorithms and Applications 3.00
 CS 633. Computer Forensics 3.00
 CS 635. Secure Network Operations 3.00

CS 660. Advanced Network Security 3.00

Total: 27 Credit Hours

Thesis Route

CS 700. Thesis Research 2.00 - 3.00

Total: 33 Credit Hours

Non-Thesis Route

Approved Electives 6 Credit Hours

Total: 33 Credit Hours

Computer Science, Secure Computer and Database Systems Certificate

The MS/Computer Science program offers several certificate programs that provide working professionals and students from other disciplines a chance to learn in-depth about a specific topic without completing the entire MS curriculum. These programs are available to all JMU graduate students and to the public in general through JMU's Outreach and Engagement office. Course credit earned through these certificate programs can also be used towards earning an MS degree later. These certificate programs are available on campus only.

Prerequisites for the certificate programs generally include a baccalaureate degree and working knowledge of computer systems. See the specific program listings for details. Though multiple certificates may be earned, no more than one course may be used toward multiple certificates.

Certificate in Secure Computer and Database Systems

This certificate will provide an understanding of computer system and database operations and related security problems and solutions.

Prerequisites:

- Baccalaureate degree
- Two years of programming education or experience
- Working knowledge of Java or C++

Required Courses

CS 550. Operating Systems 3.00
 CS 557. Information Security 3.00
 CS 574. Database Systems 3.00

Total: 9 Credit Hours

Counseling, M.A./Ed.S.

Clinical Mental Health Counseling Program

Program Director: Dr. Amanda Evans

Admission Requirements

Minimum admissions requirements for entry to the clinical mental health counseling program include the following:

- Completion of a baccalaureate degree with a satisfactory grade point average.
- Satisfactory scores on the general portion of the Graduate Record Examination.
- A personal statement.
- A resume.
- Three completed reference forms from individuals familiar with the student's potential for graduate education.
- A minimum of 18 credit hours of undergraduate preparation in psychology or related behavioral sciences.
- A personal interview and a screening session with the program committee.
- As a part of the final admissions process, applicants must complete a criminal history check.

Mission

As members of the clinical mental health counseling program of James Madison University, we have formed our own special community of faculty, staff and students. We vary in abilities, age, class, gender, ethnicity, race, religion, sexual orientation and place of birth, but we share a common vision of achieving a vitally important mission – transforming students into successful mental health counselors.

Our alumni are dedicated to providing competent, caring and ethical services to diverse clients in public agencies, community programs and private practices. Putting our principles into practice, we strive to create a caring community in which we can thrive personally and grow professionally. While many of our graduates work in rural communities in Virginia's Shenandoah Valley or among the mountains of West Virginia, many more have moved on to serve in other communities throughout the mid-Atlantic region and across the nation. We invite our students to embark on a life-long journey of exploring new possibilities, refining their skills and staying fresh throughout their careers. We encourage them to support one another in the formidable task of facilitating the change process in individuals, couples, families, groups and communities as licensed professional counselors. We challenge our graduates to advance the clinical mental health counseling profession through service, research, innovation, advocacy and training.

Curriculum

The clinical mental health counseling program provides the course work necessary to become licensed professional counselors in community mental health centers, community agencies, psychiatric facilities and private practice. The program is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). At the end of the three year, 60-credit-hour program, students receive both the Master of Arts and the Educational Specialist degrees. Graduates are also eligible to become national certified counselors.

Minimum Requirements

PSYC 600. Introduction to Measurement and Statistics 3.00

PSYC 607. Assessment Procedures in Counseling 3.00

PSYC 614. Advanced Developmental Psychology 3.00

PSYC 630. Clinical Mental Health Counseling 3.00

PSYC 660. Counseling Theories 3.00

PSYC 661. Counseling Techniques 3.00

PSYC 663. Substance Abuse Counseling 3.00

PSYC 664. Counseling Process 3.00

PSYC 665. Group Counseling 3.00

PSYC 668. Couple and Family Systems 3.00

PSYC 669. Career Development 3.00

PSYC 685. Psychopathology: Diagnosis and Intervention Planning 3.00

PSYC 695. Practicum 1.00 - 6.00

PSYC 710. Counseling Strategies: Special Topics 1.00 - 3.00

PSYC 749. Multicultural Perspectives in Intervention 3.00

PSYC 760. Supervision and Consultation for Counselors 3.00

PSYC 790. Internship 3.00 - 6.00

Research Project/Thesis 3 Credit Hours

Elective course (adviser approval required) 3 Credit Hours

Choose one of the following:

PSYC 700. Thesis Research 3.00 - 6.00 (Note: Thesis option requires an additional 3 credit hours)

PSYC 800. Educational Specialist Research Project 1.00 - 3.00 ¹

Total: 60 Credit Hours

Footnote

¹ Only three credit hours of PSYC 800 may be used to satisfy program requirements for the educational specialist degree. If the research project is not completed after three credit hours, then the student must continuously enroll (each semester including summer) in PSYC 799 until the project is completed.

Counseling, M.Ed., College Student Personnel Administration

Program Co-Directors: Dr. Joshua Bacon and Ms. Donna Harper

Admission Requirements

Minimum admissions requirements for entry to the college student personnel administration program include the following:

- Completion of a baccalaureate degree with a satisfactory grade point average.
- Satisfactory scores on the general portion of the Graduate Record Examination.
- A personal statement and resume.
- Three completed reference forms from individuals familiar with the student's potential for graduate education.
- An on-campus interview day with program faculty and staff.

Mission

The mission of the college student personnel administration program is to prepare students to be educated and enlightened professionals who will lead productive and meaningful careers and to advance the profession of student personnel administration.

The Master of Education degree in college student personnel administration is designed to provide professional preparation for college, university and community college administrative positions. Preparation for college student personnel careers involves participation in learning experiences designed to provide an understanding of the college student, counseling theories, various collegiate subcultures and the nature of higher education as an institution in the United States. The program's link with counseling psychology provides opportunities for personal growth and the development of interpersonal relationship skills.

Minimum Requirements

AHRD 670. American Higher Education 3.00

PSYC 600. Introduction to Measurement and Statistics 3.00

PSYC 645. Student Personnel Services 3.00

PSYC 646. The American College Student 3.00

PSYC 649. Multiculturalism, Diversity and Difference: Theory, Research and Practice in Student Affairs 3.00

PSYC 650. Organization and Administration of Student Services 3.00

PSYC 651. Supervision and Consultation Processes in Student Personnel 3.00

PSYC 660. Counseling Theories 3.00

PSYC 661. Counseling Techniques 3.00

PSYC 665. Group Counseling 3.00

PSYC 695. Practicum 1.00 - 6.00

PSYC 669. Career Development 3.00

Total: 36 Credit Hours

Counseling, M.Ed., School Counseling

Program Director: Dr. Michele Kielty

Admission Requirements

Minimum admission requirements for entry to the school counseling program include the following:

- Completion of a baccalaureate degree with a satisfactory grade point average.
- Satisfactory scores on the general portion of the Graduate Record Examination.
- A personal statement.
- A resume.
- Three completed reference forms from individuals familiar with the student's potential for graduate education.
- A minimum of 18 credit hours of undergraduate preparation in education, psychology or related behavioral sciences.
- A personal interview and a screening session with the program committee.
- As a part of the final admissions process, applicants must complete a criminal history check.

Mission

The school counseling program of James Madison University is a learning community of faculty, staff and students who vary in abilities, age, class, gender, ethnicity, race, religion and sexual orientation. Coming together from a variety of geographic areas, we share a common vision of achieving a vitally important mission— training students to become successful school counselors.

Our alumni are dedicated to providing competent, caring and ethical services to diverse students in public and private schools. Putting our principles of school counseling into practice, we strive to create an academic community in which our students can thrive personally and grow professionally. While many of our graduates play vital roles in schools along Virginia's Shenandoah Valley or among the mountains of West Virginia, many more have moved on to serve in rural, suburban and urban schools throughout the mid-Atlantic region and across the nation. We invite our students to embark on a life-long journey of exploring new possibilities, refining their skills and staying fresh throughout their careers. We encourage them to support one another in the formidable task of making a difference in students' lives by meeting their emotional, social, educational and career development needs as licensed or certified school counselors. We challenge our graduates to advance the school counseling profession through service, research, innovation, advocacy and training.

Curriculum

The School Counseling Program requires 54 credit hours for completion of the Master of Education degree and is obtainable in two years if students begin their course work in the summer. This program enables graduates to become licensed school counselors in elementary, middle and secondary schools and is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). This intensive training experience meets the needs of our students as well as the school systems in which they will work by providing multiple experiential opportunities and school-focused supervision.

Minimum Requirements

PSYC 600. Introduction to Measurement and Statistics 3.00

PSYC 607. Assessment Procedures in Counseling 3.00

PSYC 614. Advanced Developmental Psychology 3.00

PSYC 640. School Counseling 3.00

PSYC 641. Prevention and Intervention in Schools 3.00

PSYC 642. Issues and Trends in K-12 Education 3.00

PSYC 660. Counseling Theories 3.00

PSYC 661. Counseling Techniques 3.00

PSYC 663. Substance Abuse Counseling 3.00

PSYC 664. Counseling Process 3.00

PSYC 665. Group Counseling 3.00

PSYC 669. Career Development 3.00

PSYC 685. Psychopathology: Diagnosis and Intervention Planning 3.00

PSYC 695. Practicum 1.00 - 6.00

PSYC 710. Counseling Strategies: Special Topics 1.00 - 3.00

PSYC 749. Multicultural Perspectives in Intervention 3.00

PSYC 790. Internship 3.00 - 6.00

Total: 54 Credit Hours

Early, Elementary and Reading Education

Phone: (540) 568-6255

Website: <http://www.jmu.edu/coe/eere/>

Graduate Program Directors

Dr. Michelle Hughes

Dr. Holly McCartney

Dr. Joy Myers

Professors

N. Barbour, T. Harris, M. Hughes, H. McCartney

Associate Professors

J. Almarode, G. Font, S. Kang, S. Mathur, J. Merritt, P. Sullivan

Assistant Professors

C. Bahlmann-Bollinger, A. Bodle, K. Dredger, K. Kavanagh, S. Lupo, J. Myers, M. Sharifian, E. Thacker, R. Wilson

Instructor

P. Kennedy

Mission

The Department of Early, Elementary and Reading Education is committed to preparing caring, knowledgeable, skilled and reflective professionals who are committed to teaching all children. The department emphasizes supervised clinical placements that provide candidates with experiences in diverse settings that have a wide range of ages and abilities. Graduates are eligible for additional endorsements and/or licensure in Virginia.

Programs of Study

- Master of Arts in Teaching (M.A.T.) with a concentration in early childhood education, designed for individuals who hold a bachelor's degree and are interested in initial licensure to teach young children in preschool and grades K-3.
- Master of Arts (M.A.T.) in elementary education, a continuation of the undergraduate program in elementary education.
- Master of Education (M.Ed.) in Education with a concentration in reading education, designed for licensed teachers who are preparing to fill the role of reading specialist.

Education, Early Childhood Education (PreK-3), M.A.T.

Admission Criteria

All criteria are considered when reviewing the candidates for admission to the early childhood graduate programs; however, no one criterion will be the sole reason for lack of admission to the program.

- Baccalaureate degree from a regionally accredited college/university with grade point average of 2.75 or higher.
- Passing Praxis Core Math and VCLA before beginning the program
- Two professional references
- Content prerequisites based on a transcript review conducted by the program director.
- Faculty interview.
- Admission to Teacher Education by the second semester (Spring) including passing scores on Praxis Subject Assessment (Elementary)

Prerequisites courses include but are not limited to:

PSYC 160. Lifespan Human Development (3 credits)

EDUC 300. Foundations of American Education (3 credits)

Program Mission and Outcomes

The mission of the ECED M.A.T. is to prepare professional early childhood teachers who provide developmentally appropriate programming for children in educational settings.

Candidates are prepared to:

- make effective decisions about curriculum and instructional methods based on an understanding of the whole child, child development theory and research on best practices;
- interact and communicate effectively with young children;
- assess children's growth and development using multiple data sources;
- communicate effectively and work cooperatively with parents/families, school personnel and the broader community; and
- engage other professionals, colleagues and administrators in support of children as members of a learning community.

Candidates in the program are expected to demonstrate commitment to their own professional growth and development; to follow standards of ethical professional behavior and practice; to advocate on behalf of all children, their families and early childhood education; and to become educational leaders.

Program Description

The Early Childhood Master of Arts in Teaching program prepares individuals to become successful teachers in PreK-third grade classrooms. Through sequenced courses and accompanying field experiences including student teaching, individuals who complete the 39 graduate credit hour program will earn a Virginia teaching license and a graduate degree.

Additional Information

All candidates must complete an inquiry project and receive passing grades on key assessments before completing the program. The key assessments reflect candidate development and performance throughout the program. The concentration is fully aligned with the standards of National Association for the Education of Young Children.

Student Teaching

Candidates must apply to student teach one year prior to their student teaching semester. At that time, students must be fully accepted into teacher education, be admitted unconditionally to graduate school and have a 3.0 graduate GPA.

Degree Requirements

PSYC 160. Lifespan Human Development 3 Credit Hours (prerequisite)

EDUC 300. Foundations of American Education 3 Credit Hours (prerequisite)

LED 566. Literacy Acquisition and Development of the Young Reader 3.00

LED 636. Primary Grades Literacy Learning 3.00

ECED 508. Observation and Study of the Young Child 3.00

ECED 510. The Creative Arts in Early Childhood Education 3.00

ECED 511. Early Childhood Practicum with Attention to Diversity 3.00

ECED 512. Facilitating Children's Natural and Social Science Constructions 3.00

ECED 641. Working with Parents of Young Children 2.00

ECED 544. Children and Mathematics in Grades PreK-3 3.00

ECED 609. Constructivist Curriculum Design and Evaluation 3.00

ECED 611. Early Childhood Practicum with Attention to Special Education 3.00

ELED 632. Inquiry in Elementary Education 3.00

ELED 633. Seminar in Education Inquiry 1.00

Education, M.A.T., Elementary Education (PreK-6)

The Elementary Education M.A.T program is a continuation of the undergraduate program. Candidates in this five-year-program are prepared to teach students in grades PreK-6. The program is approved by the Virginia Department of Education and successful graduates of the program receive a Virginia Teaching License for PreK-6.

Admission Criteria

All criteria are considered when reviewing the candidates for admission to the Elementary Education program. To be fully admitted to the Elementary Education M.A.T. degree program, candidates must have successfully met:

- All requirements for admission to teacher education.
- All requirements for admission to The Graduate School, including:
- Successful completion of JMU undergraduate degree with an IDLS major and ELED minor
- Undergraduate GPA of 2.75 or better
- Passing scores on Praxis Subject Assessment - Elementary Education Multiple Subjects

Program Mission and Outcomes

The Master of Arts in Elementary Education (PreK-6) initial licensure program seeks to foster in its candidates:

- an understanding of the ways that children are affected by social contexts and by the children's own abilities/disabilities.
- the knowledge and pedagogical skills to support each child's success.
- These school professionals will:
 - critically challenge conventional wisdom and common practices to identify hidden assumptions and activities that constrain or privilege some at the expense of others;
 - openly consider and explore a range of teaching philosophies and practices and their relevance in particular contexts;
 - ask questions and develop an inquiring approach;
 - reflect deeply on relationships with their own families, peers, and university and school mentors and their students;
 - express knowledge, skills and attitudes in ways that communicate the creative and academic expression of the profession and the self;
 - develop an appreciation for the global connection of all humanity and our interdependence on the finite, natural resources of the earth;
 - experience life among people whose social contexts are unlike their own to broaden and deepen their respect of and sensitivity to various cultures and social contexts; and
 - appreciate the complexity of human development from conception throughout the period of childhood/preadolescence.

Program Description

The Master of Arts in Teaching 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 an interdisciplinary approach to instruction that reflects an understanding of the diverse nature of learners and their families.

Student Teaching

Candidates must apply to student teach one year prior to their student teaching semester. Beginning the student teaching semester is contingent upon full acceptance in teacher education, unconditional admittance into graduate school and a minimum 3.0 graduate G.P.A.

Course Requirements

ELED 510. Creativity and the Arts in Elementary Education 3.00

ELED 533. Children and Mathematics II: Data, Chance, and Space 3.00

ELED 621. Practicum with A Focus on Inquiry 2.00

ELED 622. Seminar in Inquiry 1.00

ELED 632. Inquiry in Elementary Education 3.00

LED 590. Literacy Across the Curriculum (for M.A.T.) 3.00

ELED 570. Planning, Instruction and Assessment in the Elementary Education Curriculum 3.00

ELED 641. Families, Schools, and Communities 2.00

ELED 690. Internship in Teaching 4.00 (Must be repeated for 8.00 credits in total)

Elective 3 Credit Hours

Total: 31 Credit Hours

Education, M.Ed., Literacy Education Concentration

The Master of Education (M.Ed.) program with a concentration in Literacy Education is intended for experienced classroom teachers who want to prepare to become reading intervention teachers or reading specialists.

Admission Criteria

All criteria are considered when reviewing applications for the M.Ed. degree program with a concentration in Literacy Education. These include:

- Baccalaureate degree from a regionally accredited college/university.
- Three related work samples which show evidence of your ability to design and/or develop learning experiences using literacy.
- Undergraduate grade point average of 3.0 or higher.
- A valid teaching license.
- A professional resume.
- A two- to three-page written statement describing the applicant's professional background and long-term professional goals.
- Recommendations from 2 relevant school personnel familiar with the candidate's teaching performance and leadership potential.
- Applicants may also be asked to complete an interview.

Program Mission and Outcomes

The purpose of the graduate program in literacy education is to prepare educators who can function as classroom reading teachers and in specialist roles in the public schools. Goals for candidates completing the reading program include developing expertise in reading instruction for all students, with a special emphasis on struggling readers; becoming experts at assessment, including literacy assessments of individual students and assessments of the literacy program; and becoming leaders in professional development and in collaborations involving literacy instruction with teachers, paraprofessionals, administrators, families and communities.

In preparation for these professional roles, candidates in the reading program will develop:

- Knowledge of the foundations of reading and writing processes and instruction.
- An understanding of a wide range of instructional practices, approaches, methods, and curriculum materials to support reading and writing instruction.

- Knowledge of a variety of assessment tools and practices to plan and evaluate effective reading instruction.
- Knowledge of how to create a literate environment that fosters reading and writing.
- A view of professional development as a career-long effort.

Required Courses

LED 582. Foundations of Early and Elementary Literacy *3.00*

LED 586. Children's and Adolescent Literature *3.00*

LED 588. Writing Instruction *3.00*

LED 595. Literacy Across the Curriculum (for M.Ed.) *3.00*

LED 600. Research and Research Methods in Literacy *3.00*

LED 602. Word Knowledge: Phonics, Spelling, and Vocabulary *3.00*

LED 604. Literacy Instruction for English Language Learners *3.00*

LED 658. Practicum in Literacy Assessment and Intervention I *3.00*

LED 660. Practicum in Literacy Assessment and Intervention II *3.00*

LED 665. Organization and Supervision of Reading Programs *3.00*

LED 670. Literacy Coaching and Internship *3.00*

Total: 33 Credit Hours

Educational Foundations and Exceptionalities

Academic Unit Head

Dr. William White

Location: Memorial Hall 3126

Phone: (540) 568-6193

Website: <http://www.jmu.edu/coe/exed/>

Graduate Program Director

Dr. Dannette Allen-Bronaugh

Professors

L. Deportes, S. Wasta, W. White

Associate Professors

D. Allen-Bronaugh, K. Bethune, S. Blatz, R. Bosch, K. Koubek, T. Thomas

Assistant Professors

T. Brown, R. Rodriguez, W. Simmons, S. Snyder, M. Williams

Instructor

L. Schick

Admission Criteria

In addition to The Graduate School qualifications for admissions, potential candidates must meet the following requirements for all programs.

- Undergraduate grade point average of 2.75 or higher.
- Baccalaureate degree from a regionally accredited college/university.
- Check with the program to which you are applying for additional admission criteria. Admission criteria may vary by program.

The Department of Educational Foundations and Exceptionalities offers Master of Arts (M.A.T.) and Master of Education (M.Ed.) degree programs. The M.A.T. leads to professional licensure in Virginia while the Master of Education (M.Ed.) degree programs may lead to a certificate or endorsement in Virginia but is not an initial licensure program. The programs are designed to prepare resilient teachers and other allied professionals who are advocates for children and youth with disabilities, are qualified for the complexity of their professional roles, and are reflective problem-solvers.

Graduate level preparations are available in autism, behavior specialist, early childhood special education, equity and cultural diversity, gifted education, inclusive early childhood education, special education K-12 adapted curriculum, special education K-12 accessing the general education curriculum, teaching English as second language, and vision impairments.

Candidates working toward the completion of either the M.A.T. or the M.Ed. degree programs, or the add-on endorsement programs, must obtain at least a letter grade of "B" in all graduate level required or elective courses. Candidates who receive a letter grade lower than "B" must repeat the course. Should a candidate receive a letter grade of "B-" or "C" in a required or elective course external to the special education program, the "B-" or "C" may be offset by a letter grade of "A" as stipulated in The Graduate School grading policy; however, the three "C" dismissal policy still applies.

Exceptions to all program requirements must be approved in writing by the graduate program director, the Educational Foundations and Exceptionalities department head and by the dean of The Graduate School. When exceptions relate to licensure, the approval of the dean of the College of Education is also required.

Mission

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.

James Madison University's College of Education is distinguished through faculty and candidate achievements, academic rigor, excellence in teaching, candidate 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:

- Graduate programs 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 service programs in cooperation with public and private schools and agencies, other colleges, institutions, and businesses.
- The undergraduate and graduate teacher education programs are accredited by the National Council for Accreditation of Teacher Education and approved by the Virginia State Board of Education.
- The basic philosophy of the college is reflected in the following 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 candidates, faculty members and community.
- To anticipate societal needs and provide necessary resources for implementing effective on- and off-campus programs now and in the future.

Department Mission and Outcomes

The Department of Educational Foundations and Exceptionalities is committed to excellence in teaching, scholarship and service that will influence policy and practice related to the education of individuals with exceptionalities. Our mission is to prepare exemplary professionals to generate, use and disseminate knowledge about teaching, learning and human development to solve critical educational and human service problems in a diverse global community. To that end, graduates of the program will be able to:

- Demonstrate knowledge of characteristics and issues surrounding those areas of exceptionality identified for services through federal and state legislative mandates.
- Demonstrate knowledge of historical, current and emerging perspectives on theory and practice.
- Demonstrate understanding of social, cultural and linguistic influences on children, youth and adults who are exceptional learners.
- Demonstrate an understanding of principles of learning and theoretical approaches for cognitive, physical and behavioral intervention.
- Demonstrate a level of skill competence sufficient to assure positive growth and development in those individuals served.
- Serve as reflective, resilient teachers or professional service providers who are advocates for individuals with exceptionalities.

Education, M.S.Ed., Adult Education/Human Resource Development

Admission Criteria

The following must be provided when submitting the online application:

- An online application submitted at: <http://www.jmu.edu/grad/prospective>.
- Official transcripts reflecting all post-secondary education, with a cumulative grade point average of 2.75 or higher. Applicants can have electronic copies of transcripts sent via eSCRIP-SAFE.
- An official record of scores on the general test of the Graduate Record Examination (scores must be less than five years old) or approved GRE waiver application. Applicants should use JMU's designated code of 5392 to send electronic test scores. GRE scores at the 25th percentile or higher for both verbal and quantitative sections.
- A two to three page personal statement explaining why the applicant is interested in pursuing a Master's in AHRD.
- Two letters of recommendation from employers or educators who can attest to the applicant's potential for graduate-level course work.
- A copy of the applicant's current resume.

The Master of Science in Education degree with a major in adult education/human resource development is designed for persons entering or advancing in positions associated with learning in education, business, industry, government, and other public and private sector organizations. The program is targeted to college graduates pursuing a career in the AHRD field, experienced AHRD professionals who want to expand their skills and enhance their career potential, and working managers and professionals in leadership roles where skills in developing and leading people have become critical to their organizations' success. A major strength of the program is that it allows individuals to tailor their programs to individual career needs and objectives.

Program Mission and Outcomes

The mission of the AHRD program is to prepare professionals to lead, design, implement and evaluate learning programs within education, business, industry, government, military, health care, and other public and private sector organizations. In addition to delivering effective instruction, AHRD professionals design ways to improve human performance, facilitate change and enhance creativity.

By completing our program, graduates will be able to:

- Understand and apply systems theory, analytic systems, principles of adult development, learning theory and leadership theory.
- Understand business, industry, educational and other organizational settings.
- Identify, understand and build effective organizational relationships that support teaching, learning and continuous human performance improvement appropriate to the context.
- Organize, manage and evaluate teaching, learning and continuous human performance improvement efforts.
- Analyze, design, develop, implement and evaluate targeted curriculum in appropriate modes (including distance, action, self-directed, transformative, informal learning, etc.) for individual, team and organizational applications with a focus on continuous human performance improvement.
- Facilitate and lead team-based learning activities appropriate to the context.
- Apply appropriate technologies in the creation of learning programs.
- Recognize and respond responsibly to issues of diversity and ethics.
- Demonstrate the ability to articulate and forecast the vision and role for teaching, learning and continuous human performance improvement appropriate to a context.
- Interpret and conduct research.

Learners majoring in adult education/human resource development must follow several fundamental guidelines:

- Consult major and concentration advisers for advice and approval regarding the program.
- Plan to count no more than six credit hours of workshop credit in any degree program. To be accepted, workshop courses must be approved for credit in the program. The program will not accept workshop courses offered by departments outside the College of Education for elective credit.
- Adhere to The Graduate School policy that at least half of the courses in any major of concentration be at the 600 level.
- Secure the required approval of major and concentration advisers for any course credits to be transferred into a JMU degree program.

Degree Requirements

The major consists of a minimum of 36 credit hours of course work. These credits include core program courses, electives, and either a research project or a thesis. Students electing the thesis option will take one fewer elective course as thesis credits total 6 hours.

Concentrations

In addition to the core courses, students will choose electives appropriate to their interests. These electives when combined with the core courses may form a concentration. These additional courses may be taken in the AHRD program or in another area related to the students' interests. These additional courses should complement the learner's studies in adult education/human resource development and support his/her professional goals.

Concentration areas for adult education/human resource development include the following defined areas of study: leadership and facilitation, instructional design, human resource management, higher education, individualized and AHRD program evaluation and measurement. Details for each defined concentration are listed below. A learner, in conjunction with his or her adviser, can also define a concentration in another area of study such as public administration, counseling psychology, secondary education or any content area that is complementary with the learner's professional objectives. Concentrations should be decided in conjunction with the learner's adviser.

Comprehensive Examinations

During the final semester in which the learner is enrolled in this program, he/she will participate in both oral and written comprehensive examinations to be conducted by the learner's advisory committee. These examinations will cover key concepts, principles, theories and practices covered in the core courses. The comprehensive examination committee consists of at least two full-time AHRD faculty members and/or faculty of courses taken by the student.

Electronic Portfolio

During the final semester in which the learner is enrolled in this program, he/she will submit an electronic portfolio of all core course assignments to the program faculty. Evaluation of the learner's portfolio will be conducted by the learner's adviser and thesis/reading and research chair.

Core Courses

The core requirements consist of foundational courses that are the basis for the understanding of adult education/ human resource development. These core courses encourage learners to investigate adult education/human resource development and to appreciate all facets of this dynamic field.

Requirements

EDUC 641. Learning Theories and Practice 3.00 or AHRD 580. Learning in Adulthood 3.00

AHRD 520. Foundations of Adult Education/Human Resource Development 3.00

AHRD 540. Leadership and Facilitation 3.00

AHRD 600. Performance Analysis and Needs Assessment in Adult Education/Human Resource Development 3.00

AHRD 630. Research and Inquiry in Adult Education/Human Resource Development 3.00

AHRD 640. Program Evaluation and Measurement in Adult Education/Human Resource Development 3.00
LTLE 570. Design and Development of Digital Media 3.00
LTLE 610. Principles of Instructional Design 3.00

Higher Education Concentration

The concentration in higher education is designed to prepare learners who have experience and/or in-depth preparation in an academic area to provide instruction for undergraduate learners and adapt to other aspects of the undergraduate teaching environment in institutions of higher education.

Requirements

Core courses (above) 24 credits

Select a minimum of six hours from the electives listed below.

AHRD 670. American Higher Education 3.00
AHRD 671. Teaching and Learning Processes in Higher Education 3.00
AHRD 690. Special Studies in Adult Education/Human Development 3.00

Human Resource Management Concentration

Requirements

Core courses (above) 24 credits

Select a minimum of six hours from the electives listed below.

AHRD 550. Human Resource Work Experience 3.00
AHRD 570. Diversity and Ethics in AHRD 3.00
AHRD 620. Consulting in AHRD 3.00
AHRD 635. Organization and Administration of Adult Education/Human Resource Development Programs 3.00

Individualized Concentration

Requirements

Core courses (above) 24 credits

Select a minimum of six hours from courses identified in consultation with your adviser.

Instructional Design Concentration

Requirements

Core courses (above) 24 credits

Select a minimum of six hours from the electives listed below.

AHRD 550. Human Resource Work Experience 3.00
AHRD 620. Consulting in AHRD 3.00
AHRD 690. Special Studies in Adult Education/Human Development 3.00
LTLE 565. Educational Technology Management 3.00
LTLE 580. Developing and Critiquing Visual Literacy 3.00
LTLE 625. Advanced Video and Audio Production 3.00

Leadership and Facilitation Concentration

Requirements

Core courses (above) 24 credits

Select a minimum of six hours from the electives listed below.

ADSU 642. Leadership for School-Community Relations 3.00
LEAD 741. Leading Educational Organizations 3.00
AHRD 550. Human Resource Work Experience 3.00
AHRD 620. Consulting in AHRD 3.00

Program Evaluation and Measurement Concentration

This concentration is designed to provide learners with in-depth exposure to and practice of effective evaluation and measurement methods and practices related to various AHRD programs in organizations.

Requirements

Core courses (above) 24 credits

Select a minimum of six hours from the electives listed below:

AHRD 550. Human Resource Work Experience 3.00
AHRD 620. Consulting in AHRD 3.00
AHRD 690. Special Studies in Adult Education/Human Development 3.00
ISAT 620. Introduction to System Dynamics 4.00

Total: 24 Credit Hours

Concentration courses, chosen from the options below 6.00

ADSU 640. The Fundamentals of Educational Administration 3.00
ADSU 642. Leadership for School-Community Relations 3.00
LEAD 741. Leading Educational Organizations 3.00
EDUC 642. Curriculum Theory and Issues 3.00
PUAD 561. Education and Social Policy 3.00

AHRD 690. Special Studies in Adult Education/Human Development 3.00
LTLE 695. Applied Research 3.00
MBA 600. Organizational Behavior 3.00
MBA 650. Managing Human Resources 3.00
PUAD 625. Public Organizational Behavior 3.00
PUAD 626. Strategic Planning and Management 3.00

LTLE 645. Games, Simulations and Virtual Worlds for Learning 3.00
LTLE 650. eLearning Design 3.00
LTLE 655. Evaluation of eLearning 3.00
LTLE 695. Applied Research 3.00
WRTC 521. Web Design
WRTC 655. Electronic Graphic Design 3.00
WRTC 664. Critical Perspectives On Digital Cultures 3.00

AHRD 660. Facilitating Experiential and Action Learning
AHRD 690. Special Studies in Adult Education/Human Development 3.00
LTLE 695. Applied Research 3.00
PUAD 663. Philanthropy and Volunteerism 3.00
PUAD 650. Management in International Nongovernmental Organizations 3.00

LTLE 695. Applied Research 3.00
PSYC 600. Introduction to Measurement and Statistics 3.00
PSYC 605. Intermediate Inferential Statistics 3.00
PSYC 606. Measurement Theory 3.00
PSYC 608. Multivariate Statistical Methods in Psychology 3.00
PUAD 606. Program Evaluation in Public Administration 3.00

Special Education – Fifth Year, Adapted Curriculum K-12, M.A.T.

The fifth year MAT program is a continuation of the undergraduate, pre-professional program in Special Education or Inclusive Early Childhood Education. Candidates completing these professional licensure programs must meet a set of content and endorsement-specific criteria that have been established by the Commonwealth of Virginia.

It is important for candidates to understand that they must meet the requirements for a baccalaureate degree and successfully complete all undergraduate pre-professional courses and experiences prior to being fully admitted to this M.A.T. initial licensure program. Candidates must have successfully completed the special education undergraduate pre-professional program at JMU and demonstrate satisfactory performance at each program evaluation point. This M.A.T. program includes a minimum of 30 credit hours of professional education course work on the graduate level. At least half of a candidate's program of study must be taken at the 600 level. A comprehensive examination as approved by the graduate program director will be completed as part of this particular M.A.T. program.

Adapted Curriculum K-12 program

The Adapted Curriculum program prepares JMU teacher education candidates to be teachers of students with special needs in school based adapted curriculum settings.

Fifth Year Adapted Curriculum K-12 Program

Minimum Requirements

EXED 507. Special Education and Collaboration

EXED 509. Nature and Issues of Severe Disabilities 3.00

EXED 510. Systematic Behavioral Interventions 3.00

EXED 584. Methods of Instruction for Students with Moderate/Severe 3.00

EXED 602. Communication, Language and Sensory Issues of Autism and Students on Adapted Curriculum 3.00

EXED 615. Transition of Learners with Disabilities Into New Environments and Functions 2.00 - 4.00

EXED 625. Medical and Technological Aspects of Working with Children with Significant Medical Needs 3.00

EXED 638. Practicum in Special Education Adaptive Curriculum 1.00 - 3.00

EXED 650. Student Teaching in Special Education 3.00 - 6.00

EXED 650. Student Teaching in Special Education 5 credit hours

Total: 30 Credit Hours

Special Education - Fifth Year, General Curriculum K-12, M.A.T.

The fifth year MAT program is a continuation of the undergraduate, pre-professional program in Special Education or Inclusive Early Childhood Education. Candidates completing these professional licensure programs must meet a set of content and endorsement-specific criteria that have been established by the Commonwealth of Virginia.

It is important for candidates to understand that they must meet the requirements for a baccalaureate degree and successfully complete all undergraduate pre-professional courses and experiences prior to being fully admitted to this M.A.T. initial licensure program. Candidates must have successfully completed the special education undergraduate pre-professional program at JMU and demonstrate satisfactory performance at each program evaluation point. This M.A.T. program includes a minimum of 30 credit hours of professional education course work on the graduate level. At least half of a candidate's program of study must be taken at the 600 level. A comprehensive examination as approved by the graduate program director will be completed as part of this particular M.A.T. program.

General Curriculum K-12 Program

The General Curriculum program prepares JMU teacher candidates to be teachers of students with disabilities who are accessing the general curriculum in schools and working towards a standard or advanced high school diploma.

Fifth Year General Curriculum K-12 Program

Minimum Requirements

Other courses as determined by the individual needs of the candidate and upon approval of the adviser.

EXED 510. Systematic Behavioral Interventions 3.00

EXED 520. Differentiation of Instruction and Assessment to Meet the Needs of Diverse Learners 3.00

EXED 600. Instructional Methods in Special Education 3.00

EXED 615. Transition of Learners with Disabilities Into New Environments and Functions 2.00 - 4.00

EXED 637. Practicum in Remedial Elements of Special Education 3.00

EXED 650. Student Teaching in Special Education 3.00 - 6.00

EXED 650. Student Teaching in Special Education 4-6 Credit Hours

EXED 670. Professional Practice Seminar for Special Education 1.00 - 3.00

Total: 30-34 Credit Hours

Adapted Curriculum Focus

Students in the General Curriculum K-12 program may choose a focus in Adapted Curriculum. In addition to completing the required courses for General Curriculum K-12 students will also complete the 15 credit hours of Adapted Curriculum courses. Students who successfully complete the course in both the General Curriculum K-12 program and the additional credit hours in the Adapted Curriculum will be able to obtain Initial Teaching Licenses in General Curriculum K-12 and Adapted Curriculum K-12. Students adding this focus will complete one student teaching in a general curriculum classroom and the other in an adapted curriculum classroom.

Adapted Curriculum Focus Requirements

Required Courses

EXED 509. Nature and Issues of Severe Disabilities 3.00

EXED 584. Methods of Instruction for Students with Moderate/Severe 3.00

EXED 602. Communication, Language and Sensory Issues of Autism and Students on Adapted Curriculum 3.00

EXED 625. Medical and Technological Aspects of Working with Children with Significant Medical Needs 3.00

EXED 638. Practicum in Special Education Adaptive Curriculum 1.00 - 3.00

Special Education - Fifth Year, Inclusive Early Childhood Education, M.A.T.

The fifth year MAT program is a continuation of the undergraduate, pre-professional program in Special Education or Inclusive Early Childhood Education. Candidates completing these professional licensure programs must meet a set of content and endorsement-specific criteria that have been established by the Commonwealth of Virginia.

It is important for candidates to understand that they must meet the requirements for a baccalaureate degree and successfully complete all undergraduate pre-professional courses and experiences prior to being fully admitted to this M.A.T. initial licensure program. Candidates must have successfully completed the special education undergraduate pre-professional program at JMU and demonstrate satisfactory performance at each program evaluation point. This M.A.T. program includes a minimum of 30 credit hours of professional education course work on the graduate level. At least half of a candidate's program of study must be taken at the 600 level. A comprehensive examination as approved by the graduate program director will be completed as part of this particular M.A.T. program.

Inclusive Early Childhood Education Program

The inclusive early childhood program draws heavily from research and theories in child development, family systems, special education, differentiated teaching and learning. Through course work and extensive field experiences, the teacher candidate is prepared to design activities that have an interdisciplinary focus, reflect an understanding of the individual child's development and learning, recognize the importance of family and developmental influences, support the young child in constructing knowledge about self and the world, and involve parents in supporting the child's growth and development.

The Master of Arts in teaching (M.A.T.) program in inclusive early childhood education is a continuation of the undergraduate IECE program. For more information, see <http://www.jmu.edu/coe/eere/iecemat.shtml>.

Minimum Requirements

Other courses as determined by the individual needs of the candidate and upon approval of the adviser.

Fall Semester, First Graduate Year

IECE 612. Effective Teaching in Early Childhood Education 3.00

IECE 613. Practicum in the Education of Young Children 3.00

IECE 614. Individualized Behavior Intervention for Young Children 3.00

IECE 632. Creativity and Play 3.00

EXED 625. Medical and Technological Aspects of Working with Children with Significant Medical Needs 3.00

Spring Semester, First Graduate Year

Special Education, Adaptive Behavior, M.A.T.

The post-bac M.A.T. (initial licensure) program is designed for individuals who already hold a bachelor's degree from a regionally accredited college or university and are interested in pursuing initial licensure to teach special education K-12 Adapted Curriculum, special education K-12 accessing the General Education Curriculum, Early Childhood Special Education (ECSE) or Visual Impairments. Candidates who have not completed the JMU undergraduate pre-professional program are required to provide transcript evidence that they have completed liberal studies and specified subject matter courses deemed necessary for pursuing licensure in special education. Those candidates not having such course work will be required to complete undergraduate-level, general education and/or subject matter content courses under the terms of provisional admission to graduate study as a degree-seeking candidate.

Additional Admission Requirements for Post-Baccalaureate programs:

- Pass the Praxis I Core Math and the Virginia Communication and Literacy Assessment (VCLA)
- Professional resume
- Two letters of reference (one which can speak to potential as a graduate student and the other which addresses professional dispositions)
- A two- to three-page written statement (double spaced) describing the applicant's professional background, the educational issues that the applicant would like to address in the master's program, and the applicant's long-term professional goals

After you have been admitted to The Graduate School and have received your student ID, you must apply for admission to Teacher Education. Your application to Teacher Education through JMU's Education Support Center (ESC) is the first step in the process of obtaining your Virginia State Teaching License. This must be completed by the end of your first semester of course work.

Required for application:

- Completion of online application form: <http://www.jmu.edu/coe/esc/admissions/>
- Entry Assessments
- Undergraduate grade point average of 2.5 or higher
- Earn a "C" or better in the following classes:
- WRTC 103, or equivalent
- MATH designated course
- PSYC 160 or equivalent
- EDUC 300 or equivalent
- Two professional references
- Trainings
- Adviser's signature on printed copy of application. Bring the printed form to your adviser and return signed form to the Education Support Center (ESC)
- Complete registration and pay for TK20
- Complete the pre-professional self-assessment in TK20

The initial licensure M.A.T. degree program must contain a minimum of 30 credit hours of professional education course work at the graduate level. The total number of credit hours, however, may vary depending upon the educational background of the student. Please contact your assigned advisor to develop a plan of study. At least half of a candidate's program of study must be taken at the 600 level. In some rare cases, depending on a candidate's prior academic preparation, other prerequisite course work may be required for unconditional admission to this graduate program and to meet teacher licensure requirements. A comprehensive examination is required as part of the M.A.T. programs in K-12 Adapted Curriculum, K-12 General Curriculum and ECSE. A final portfolio will be completed by candidates in the visual impairments concentration.

Teacher Licensure Competencies

These courses may be needed by advisement to meet licensure standards.

PSYC 160. Human Growth and Development Birth through Adolescence

EDUC 300/620. Foundations of Education

TESL 426/626 or CSD 540 or READ 430. Reading

Required Courses

Natures and Issues courses

EXED 509. Nature and Issues of Severe Disabilities 3.00

EXED 625. Medical and Technological Aspects of Working with Children with Significant Medical Needs 3.00

READ 533. Literacy Acquisition and Development of the Young Reader

Teaching Methods courses

EXED 507. Special Education and Collaboration

EXED 510. Systematic Behavioral Interventions 3.00

EXED 584. Methods of Instruction for Students with Moderate/Severe 3.00

EXED 602. Communication, Language and Sensory Issues of Autism and Students on Adapted Curriculum 3.00

EXED 440/512. Behavior

EXED 200/508. Foundations of Exceptional Education

Teaching Mathematics in Elementary and Middle Grades (MIED 530)

EXED 615. Transition of Learners with Disabilities Into New Environments and Functions 2.00 - 4.00

Professional Studies courses

EXED 607. Program Development and Planning in Special Education 3.00

EXED 612. Psychoeducational Assessment of Learning and Behavior Problems 3.00

Field Experiences/Internships

EXED 610. Practicum in Inclusive Settings 2.00 - 3.00

EXED 638. Practicum in Special Education Adaptive Curriculum 1.00 - 3.00

Student Teaching courses

EXED 650. Student Teaching in Special Education 3.00 - 6.00

Total: 44 Credit Hours

Special Education, Behavior Specialist, M.Ed.

The following program of study is designed to allow students admitted to the M.Ed. behavior specialist concentration to take the EXED courses required for the Master of Education degree, with the concentration courses meeting the course work requirements to sit for the Board Certified Behavior Analyst (BCBA) exam.

Degree Requirements

College of Education Core: 9 Credit Hours

EDUC 630. Inquiry in Education 3.00

EDUC 700. Thesis Research 6.00

Educational Foundations and Exceptionalities Core: 6 Credit Hours

EXED 510. Systematic Behavioral Interventions 3.00

EXED 584. Methods of Instruction for Students with Moderate/Severe 3.00

Concentration Courses: 20-28 Credit Hours

EXED 620. Behavioral Assessment 3.00

EXED 636. Practicum in Behavior Intervention Methods 1.00 - 3.00

PSYC 601. Special Topics in Psychology 1.00 - 3.00

PSYC 610. Principles of Behavior Analysis 3.00

PSYC 690. Experimental Analysis of Behavior 3.00

PSYC 805. Single Case Experimentation 3.00

Total: 35-43 Credit Hours

Special Education, Early Childhood Special Education, M.A.T.

Minimum Requirements

Other courses may be determined by the individual needs of the candidate and approved by the adviser.

Teaching Methods Courses

EXED 503. Application of Educational Technology for Students with Disabilities 1.00
EXED 505. Service Delivery in Early Childhood Special Education 3.00
IECE 614. Individualized Behavior Intervention for Young Children 3.00 or
EXED 510. Systematic Behavioral Interventions 3.00

Nature and Issues Courses

EXED 508. Nature and Issues of Exceptionalities 3.00
EXED 509. Nature and Issues of Severe Disabilities 3.00
EXED 621. Issues and Trends in Early Childhood Education 3.00
EXED 625. Medical and Technological Aspects of Working with Children with Significant Medical Needs 3.00

Professional Studies Courses

EXED 622. Assessment in Early Childhood Special Education 3.00

Footnote

¹ Other courses may be determined by the individual needs of the candidate and approved by the adviser.

Special Education, General Curriculum K-12, M.A.T.

The K-12 program requires two student teaching experiences (i.e., at upper and lower grade levels) across multiple areas of disability. For candidates who have completed other licensure programs, one student teaching experience may be sufficient.

Minimum Requirements

Other courses may be determined by the individual needs of the candidate and approved by the adviser.

Teaching Methods Courses

EXED 503. Application of Educational Technology for Students with Disabilities 1.00
EXED 504. Literacy Acquisition & Development: Specialized Reading Instruction for Special Needs Students 3.00
EXED 510. Systematic Behavioral Interventions 3.00
EXED 520. Differentiation of Instruction and Assessment to Meet the Needs of Diverse Learners 3.00
EXED 613. Teaching Individuals with Learning and Behavior Problems 3.00
EXED 615. Transition of Learners with Disabilities Into New Environments and Functions 2.00 - 4.00
MIED 530. Teaching Mathematics in the Elementary and Middle Grades 3.00
LED 566. Literacy Acquisition and Development of the Young Reader 3.00

Nature and Issues Courses

EXED 623. Programming in Early Childhood Special Education 3.00

Field Experience/Internship Courses

EXED 626. Practicum: Infants and Toddlers with Disabilities 3.00 or
EXED 627. Practicum: Early Childhood Special Education 3.00

Student Teaching Courses

EXED 650. Student Teaching in Special Education 3.00 - 6.00

Additional Courses Required for Licensure

LED 566. Literacy Acquisition and Development of the Young Reader 3.00
TESL 626. Concepts of First and Second Language Acquisition 3.00

Other professional competencies required for licensure (by advisement only)¹

EXED 508. Nature and Issues of Exceptionalities 3.00

Total: 44-52 credit hours

EXED 502. Characteristics of Learners with Disabilities Accessing the General Curriculum 3.00

Professional Studies Courses

EXED 607. Program Development and Planning in Special Education 3.00
EXED 612. Psychoeducational Assessment of Learning and Behavior Problems 3.00

Field Experience/Internship Courses

EXED 610. Practicum in Inclusive Settings 2.00 - 3.00
EXED 637. Practicum in Remedial Elements of Special Education 3.00

Student Teaching Courses

EXED 650. Student Teaching in Special Education 3.00 - 6.00
EXED 650. Student Teaching in Special Education 4 Credit Hours

Total: 48 Credit Hours

Special Education, M.A.T.

The Master of Arts in Teaching degree program is designed to lead to initial licensure in special education. Candidates completing the program are prepared to serve as teachers of individuals with disabilities in a variety of educational placements. There are two programs of study for students wishing to pursue an M.A.T. in Special Education; Post-Baccalaureate program and a 5th year program.

Post-Baccalaureate M.A.T. Program: Initial Licensure Program

The post-bac M.A.T. (initial licensure) program is designed for individuals who already hold a bachelor's degree from a regionally accredited college or university and are interested in pursuing initial licensure to teach special education K-12 Adapted Curriculum, special education K-12 accessing the General Education Curriculum, Early Childhood Special Education (ECSE) or Visual Impairments. Candidates who have not completed the JMU undergraduate pre-professional program are required to provide transcript evidence that they have completed liberal studies and specified subject matter courses deemed necessary for pursuing licensure in special education. Those candidates not having such course work will be required to complete undergraduate-level, general education and/or subject matter content courses under the terms of provisional admission to graduate study as a degree-seeking candidate.

Additional Admission Requirements for Post-Baccalaureate programs:

- Pass the Praxis I Core Math and the Virginia Communication and Literacy Assessment (VCLA)
- Professional resume
- Two letters of reference (one which can speak to potential as a graduate student and the other which addresses professional dispositions)
- A two- to three-page written statement (double spaced) describing the applicant's professional background, the educational issues that the applicant would like to address in the master's program, and the applicant's long-term professional goals

After you have been admitted to The Graduate School and have received your student ID, you must apply for admission to Teacher Education. Your application to Teacher Education through JMU's Education Support Center (ESC) is the first step in the process of obtaining your Virginia State Teaching License. This must be completed by the end of your first semester of course work.

Required for application:

- Completion of online application form: <http://www.jmu.edu/coe/esc/admissions/>
- Entry Assessments
- Undergraduate grade point average of 2.5 or higher
- Earn a "C" or better in the following classes:
 - WRTC 103, or equivalent
 - MATH designated course
 - PSYC 160 or equivalent
- EDUC 300 or equivalent
- Two professional references
- Trainings
- Adviser's signature on printed copy of application. Bring the printed form to your adviser and return signed form to the Education Support Center (ESC)
- Complete registration and pay for TK20
- Complete the pre-professional self-assessment in TK20

The initial licensure M.A.T. degree program must contain a minimum of 30 credit hours of professional education course work at the graduate level. The total number of credit hours, however, may vary depending upon the educational background of the student. Please contact your assigned advisor to develop a plan of study. At least half of a candidate's program

of study must be taken at the 600 level. In some rare cases, depending on a candidate's prior academic preparation, other prerequisite course work may be required for unconditional admission to this graduate program and to meet teacher licensure requirements. A comprehensive examination is required as part of the M.A.T. programs in K-12 Adapted Curriculum, K-12 General Curriculum and ECSE. A final portfolio will be completed by candidates in the visual impairments concentration.

Teacher Licensure Competencies

These courses may be needed by advisement to meet licensure standards.

PSYC 160. Human Growth and Development Birth through Adolescence

EDUC 300/620. Foundations of Education

TESL 426/626 or CSD 540 or READ 430. Reading

EXED 440/512. Behavior

EXED 200/EXED 508. Foundations of Exceptional Education

Teaching Mathematics in Elementary and Middle Grades (MIED 530)

Special Education, M.Ed.

The M.Ed. in special education offers a program of study for individuals who already hold a professional teaching license or those wishing to work with individuals with exceptionalities in areas other than teaching. Candidates will be prepared for advanced positions in Educational Foundations and Exceptionalities, such as school-based department chair, program specialist, RTI specialist, behavior specialist or instructional coach. Candidates may choose to pursue an add-on certificate in autism.

The M.Ed. is a minimum 30-credit hour program. The M.Ed. includes field experiences integrated into courses, which may occur as a formal placement by the university or as a result of supervised employment. All candidates complete a final portfolio or an action research project, which serves as their comprehensive assessment.

Minimum Requirements

COE Core Courses

EDUC 630. Inquiry in Education 3.00

EDUC 641. Learning Theories and Practice 3.00

EDUC 642. Curriculum Theory and Issues 3.00

EXED Core

EXED 605. Trends and Issues in Exceptional Education 3.00 ¹

Gifted Education Concentration: 15 Credit Hours (online)

(Not currently accepting applications)

EXED 560. The Nature and Needs of Gifted Learners 3.00

EXED 565. Instructional Methods in Gifted Education 3.00

Autism Concentration: 12 Credit Hours

EXED 506. Overview and Assessment of Autism Disorders 3.00

EXED 602. Communication, Language and Sensory Issues of Autism and Students on Adapted Curriculum 3.00

Instructional Specialist Concentration: 9 Credit Hours

(Not currently accepting applications)

EXED 616. Data-Based Decision Making 3.00

Electives (by advisement only)

0-8 credit hours²

Total: 30 Credit Hours (minimum)

Footnotes

¹ Students in the gifted concentration will take EXED 665 in lieu of EXED 605.

² The number of elective credits is determined based on the student's selected concentration and professional interests. Acceptable courses are determined by the individual needs of the candidate and upon approval of the adviser.

Choose one of the following:

EXED 608. Portfolio in Exceptional Education 2.00 - 4.00

EXED 609. Research in Exceptional Education 1.00 - 4.00

Concentrations

Students select one of the following concentrations and must complete all courses required

EXED 570. Practicum in Gifted Education 3.00

EXED 660. Curriculum Design in Gifted Education 3.00

EXED 665. Trends and Issues in Gifted Education 3.00

EXED 603. Challenging Behaviors, Positive Behavioral Supports, Functional Behavior Assessment and Behavioral Intervention Plans 3.00

EXED 604. Practical Experience in Autism 2.00

EXED 617. Strategies for Inclusive Classrooms 3.00

EXED 618. Evidence-Based Practices 3.00

Special Education, Visual Impairments, M.A.T.

Courses in the visual impairments concentration are offered through the Virginia Consortium for Teacher Preparation in Visual Impairments. In addition to the aforementioned application criteria, students must be accepted into the Virginia Consortium for Teacher Preparation in Visual Impairments. All courses specific to vision impairments are offered in a distance education format. For more information, see <https://gse.gmu.edu/special-education/vi-consortium/>.

A minimum of 33 credit hours are required to complete the JMU program. Total credit hours required will be determined in conjunction with the program adviser.

Minimum Requirements

Electives (by advisement only) ¹

Teaching Methods Courses

EXED 504. Literacy Acquisition & Development: Specialized Reading Instruction for Special Needs Students 3.00

EXED 507. Special Education and Collaboration

EXED 510. Systematic Behavioral Interventions 3.00

EXED 531. Assistive Technology for Individuals with Sensory Impairments 3.00

EXED 532. Braille Code 3.00

EXED 533. Orientation and Mobility 2.00

EXED 632. Braille Reading and Writing 3.00

EXED 633. Teaching Methods for Students with Visual Impairments 3.00

Nature and Issues Courses

EXED 530. Characteristics of Students with Visual Impairments 2.00

EXED 631. Medical and Educational Implications of Visual Impairments 3.00

Professional Studies Courses

EXED 634. Curriculum and Assessment of Students with Visual Impairments 3.00

Field Experience/Internship Courses

EXED 650. Student Teaching in Special Education 3.00 - 6.00

Total: 33-39 Credit Hours

Footnote

¹ Other courses as determined by the individual needs of the candidate and upon approval of the adviser.

Education, Equity and Cultural Diversity Concentration, M.Ed.

The Master of Education degree (M.Ed.) with a concentration in equity and cultural diversity provides current educators or other professionals programming in educational theory and practice that emphasize diversity. Core courses examine educational research, learning theory, curriculum development and contemporary issues in education, enabling participants to critically analyze policies, practices and procedures in American K-12 schools with an understanding of the cultural, social and political context of these institutions.

The cultural diversity core courses emphasize language diversity and explore the intersection of language and culture in theory and practice. Understanding second language acquisition, socio-cultural variables that impact student learning and factors that shape immigrants' learning experiences will aid participants in creating effective school programs and educational services to meet the needs of culturally diverse individuals. The cultural diversity core includes a practicum at the College of Education Career Development Academy assisting and interacting with first generation immigrant adult learners and their family members. To provide some flexibility in meeting individual candidate goals, the program also

offers electives to be selected by the student with advisor approval. These courses must aid the candidate in his or her understanding of diversity and may be courses within or outside of the College of Education at the 500 or 600 level. By giving candidates course options, they can shape their program of study to assist them in multiple career options such as diversity leadership positions in academic institutions, public schools, and federal and state agencies.

Admission Criteria

All criteria are considered with reviewing the candidates for admission to this Master of Education degree program. However, no one criterion will be the sole reason for lack of admission to the program. Criteria include:

- Bachelor's degree from an accredited college/university.
- An undergraduate GPA of 3.0 or higher.
- The Graduate Record Exam (GRE) or the Miller's Analogy Test (MAT) is required only for individuals who do not have an undergraduate degree of 3.0 or higher.
- Professional resume.
- A two-to-three page written statement (double-spaced) describing the applicant's professional background, the educational issues that the applicant would like to address in the master's program and the applicant's long-term professional goals.
- Evidence of the candidate's skills or experiences that may help promote and affirm cross-cultural learning or awareness.
- Informal interview with at least one of the program's faculty members to ensure the applicant understands the goals and requirements of the M.Ed. in Education with a concentration in Equity and Cultural Diversity.
- Two professional reference letters.

Admission Steps

Meet or talk with a program adviser to discuss your interests and goals in earning the M.Ed. in Education with a concentration in Equity and Cultural Diversity.

Apply to The Graduate School by completing the online application for obtaining the graduate degree-Master of Education with a concentration in equity and cultural diversity. Required documents include official transcripts from all colleges and universities attended, written statement, two professional references, and professional resume.

Graduation

All requirements for the degree must be completed by the course work completion deadline in the semester in which the degree is conferred to receive a diploma dated the day of graduation. Applications for graduation should be completed early in the term in which the candidate plans to graduate. Candidates who will satisfy all degree requirements in the summer may participate in the spring commencement ceremony if they have completed an Application for Graduation form signed by their adviser and program coordinator, and they must be pre-registered for summer classes prior to the May commencement ceremony. Candidates must be enrolled during the semester in which the degree is to be conferred. It should be noted that applicants actually graduate and receive their degrees only when all requirements are satisfied. Candidates who do not satisfy all requirements for graduation will be notified of deficiencies and must re-apply for a later graduation date.

Degree Requirements

Professional Core: 9 Credit Hours

EDUC 630. Inquiry in Education 3.00

EDUC 641. Learning Theories and Practice 3.00

EDUC 642. Curriculum Theory and Issues 3.00

Cultural Diversity Core: 15 Credit Hours

TESL 525. Cross Cultural Education 3.00

EDUC 620. Changing Contexts of American Schools 3.00

TESL 626. Concepts of First and Second Language Acquisition 3.00

TESL 628. Assessment and Curriculum Development in English as a Second Language 3.00

TESL 648. Immigration and Education 3.00

Research Requirements: 4-6 Credit Hours

TESL 695. Applied Research 3.00

TESL 683. Research and Reading in TESOL 1.00-3.00 or TESL 700. Thesis 1.00-3.00

Electives: 6 Credit Hours (Selected with an adviser's approval.)

Examples may include:

EDUC 625. Evaluation in Education 3.00

ADSU 641. School Law 3.00 or other 500 or 600 TESL courses or English literature and history courses that add to the student's understanding of our diverse society (with instructor approval)

Total: 34-36 Credit Hours

Spanish Language and Culture for Educators, M.Ed.

The Master of Education with a concentration in Spanish language and cultures for educators serves individuals who are teaching Spanish language and culture in settings that may include but are not limited to community colleges, high schools, colleges, industry and business. The program provides candidates with opportunities for in-depth study of advanced pedagogical practices in teaching, best practices in curriculum development and current research in the fields of teaching and learning.

In addition, students' content knowledge in the language and culture of Spain will be studied through course offerings supported from the expertise of faculty from the University of Salamanca (USAL). The program is delivered using both face-to-face and distance education models. It includes one summer residency on the JMU campus and one summer residency on the USAL campus.

Admission Criteria

All criteria are considered when reviewing the candidates for admission to the Master of Education with a concentration in Spanish Language and Culture degree program. However, no one criterion will be the sole reason for lack of admission to the program. Students should meet the following criteria to be considered for admission:

- Graduation from a regionally accredited college or university.
- Satisfactory grade point average (GPA).
- Satisfactory test scores from the Graduate Record Examination (GRE).
- Officially accredited B2 Spanish level according to The Common European Framework for Languages. Some accredited tests are: DELE, CELU, BULATS.

Degree Requirements

This program is offered jointly by James Madison University (JMU), United States and University of Salamanca (USAL), Spain. The program leads to a Master in Education (M.Ed.) with a concentration in Spanish Language and Culture for Educators degree from JMU and a Salamanca Masters for Teachers of Spanish as a Foreign Language degree from USAL. This program is an 18-month commitment in which students spend one summer at JMU, one summer at USAL, and three additional academic semesters (fall, spring, fall) in online classes at the students' home locations. The program focuses on in-depth study of advanced pedagogical practices in teaching, best practices in curriculum development, and current research in the field of teaching and learning. In addition, students' content knowledge in the language and culture of Spain will be studied through course offerings supported from the expertise of faculty from USAL. The program is delivered using both face-to-face and distance education models.

Requirements

Professional Core: 9 Credit Hours

EDUC 630. Inquiry in Education 3.00

EDUC 641. Learning Theories and Practice 3.00

EDUC 642. Curriculum Theory and Issues 3.00

LTLE 610. Principles of Instructional Design 3.00

Spanish Language and Culture: 21 Credit Hours

EDUC 501. Workshop in Education 1.00 - 3.00

EDUC 501. Workshop in Education: History for the Spanish Language

TESL 525. Cross Cultural Education 3.00

EDUC 613. Issues in Education: Grammar I – Spanish Linguistics

TESL 626. Concepts of First and Second Language Acquisition 3.00

TESL 630. Development, Assessment and Instruction of Literacy, K-12 3.00

EDUC 690. Internship in Education – Spanish Linguistics in the Classroom

Final Project and Research: 6 Credit Hours

EDUC 660. Facilitating Experiential and Action Learning 3.00

EDUC 680. Reading and Research 3.00

Total: 36 Credit Hours

Education, Teaching English to Speakers of Other Languages (TESOL), M.A.T.

The M.A.T. with a concentration in TESOL program is designed for individuals who have earned a bachelor's degree in a liberal arts discipline closely associated with a teaching area (e.g., biology, history, mathematics, psychology, chemistry, English, etc. but not business administration, nursing, engineering, etc.) and want to complete teacher licensure. This program draws on theories of linguistics, research on social and cultural variables that influence second language acquisition, and the knowledge required to facilitate second language learning. The TESOL program will prepare future educators to understand and implement equitable and effective ways of working with English Language Learners in a variety of contexts, including content/general education classes, sheltered-ESL classes and pullout classes. Completion of this MAT program leads to eligibility for a Virginia teaching license for PreK-12 English as a Second Language.

The degree requires the following:

- PSYC 160. Human Development Across the Life Span, or equivalent
- WRTC 103. Critical Reading and Writing, or equivalent
- MATH designated course
- ENG 308. Introduction to Linguistics, or equivalent
- EDUC 300. Foundations of American Education, or equivalent
- READ 366/LED 566. Early Literacy Development and Acquisition (with a 1 credit practicum, TESL 384/TESL 553)

Foreign language proficiency (6 credits at intermediate level). 37-39 graduate hours of TESOL course work

Applicants' undergraduate transcripts are reviewed to identify necessary prerequisite course work and to verify content knowledge requirements.

Application for the M.A.T. with a concentration in Teaching English to Speakers of Other Languages Initial Licensure Program is a three-step process.

Step 1: Transcript Review and Interview

Schedule a meeting with a TESOL adviser to review your undergraduate transcripts, discuss your interest/goals in completing the M.A.T. in Education with a Concentration in TESOL, and review your resume to determine eligibility and any prerequisite courses needed. Candidates may need to complete prerequisite competencies required by the Commonwealth of Virginia for licensure.

Bring/or email the following items:

- Undergraduate transcripts to show earned baccalaureate degree from a regionally accredited college/university (unofficial transcripts are sufficient for initial review process)
- Undergraduate grade point average of 3.00 or higher
- A professional resume

Step 2: Apply to Graduate School

Complete the online application for obtaining the graduate degree Master of Arts in Teaching with a concentration in TESOL (M.A.T. in Education with a concentration in TESOL).

Required for application:

- Official transcripts from all colleges or universities attended
- An undergraduate GPA of 3.0 or higher
- The Graduate Record Exam (GRE) or the Miller's Analogy Test (MAT) is required only for individuals who do not have an undergraduate GPA of 3.0 or higher
- Two-three page essay which describes relevant work, life experiences and professional goals related to TESOL and assisting English language learners.
- Two professional references
- Professional resume

Your application to The Graduate School, if accepted, will likely be "conditionally" accepted. After all conditions have been met, including acceptance into Teacher Education (Step 3), your status can be upgraded to "unconditional." Conditions are specified in your acceptance letter. It is your responsibility to let your adviser know when you have been accepted. Print the Graduate Status Change Request, add your name and student ID number, and bring it to your adviser/program director for a signature.

Step 3: Apply to Teacher Education

After you have been admitted to the Graduate School and have received your student ID, you should apply for admission to Teacher Education. Your application to Teacher Education through JMU's Education Support Center (ESC) is the first step in the process of obtaining your Virginia State Teaching License.

Required for application:

- Undergraduate grade point average of 2.5 or higher
- Passing scores on Praxis CORE or passing scores on SAT/ACT or other appropriate exams
- Completion of online application form
- Adviser's signature on printed copy of application. Bring the printed form to your adviser and return signed form to the Education Support Center (ESC)
- Completion of additional requirements for admission to teacher education may be found at: <https://www.jmu.edu/coe/esc/admission-licensure.shtml>

If you are not a JMU graduate, you must provide a copy of your final undergraduate transcript to the Education Support Center after you have submitted your application. Submit transcripts of all additional content courses, those specified as "conditions" in your Graduate letter of acceptance, to the Education Support Center. Candidates need to show completion with a grade of C or above in PSYC 160, WRTC 103, MATH designated course, ENG 308, EDUC 300 and READ 366/LED 566 with TESL 384/TESL 553 or equivalent courses. Candidates must demonstrate modern foreign language proficiency at the intermediate level by completion of six credits of course work at that level with a grade of "C" or above or by successful completion of a foreign language examination approved by program faculty.

Additional Information

Consult with the academic adviser or Dr. Stephanie Wasta, director of the graduate TESOL program, to ensure awareness of any changes to requirements. Refer to the College of Education website for additional program information at <http://www.jmu.edu/coe/>.

Degree Requirements

Professional Education Courses

EXED 512. Behavior Management in the Classroom 3.00

EDUC 540. Educational Technology 3.00

TESOL Courses

TESL 525. Cross Cultural Education 3.00

TESL 615. Integrated Language and Content Instruction 3.00 (corequisite TESL 550)

TESL 626. Concepts of First and Second Language Acquisition 3.00 (corequisite TESL 551)

TESL 628. Assessment and Curriculum Development in English as a Second Language 3.00

LED 635. Literacy Development and Instruction for English Language Learners 3.00
(co-requisite TESL 552)

Licensure Field Experience in TESOL

TESL 550. Practicum in TESOL Instructional Strategies 3.00

TESL 551. Practicum in TESOL 1st/2nd Language Acquisition 1.00

TESL 552. Practicum in TESOL Literacy Development 1.00

TESL 681. Student Teaching (2-8 week blocks at PreK-12 levels) 6.00 (2-8 week blocks at PreK-12 levels)

EDUC 682. Professional Development, Partnership and Advocacy 3.00

Research

TESL 683. Research and Reading in TESOL 1.00-3.00

TESL 695. Applied Research 3.00

Total: 37-39 Credit Hours

Education, M.Ed., Concentration in K-8 Mathematics Specialization

The M.Ed. program in secondary education is not accepting new students at this time.

Master of Education in Mathematics Degree

For information on the Master of Education in mathematics, see Mathematics.

Education, Educational Leadership, M.Ed.

Admission Criteria

All criteria are considered when reviewing the candidates for admission to the Master of Education degree program. However, no one criterion will be the sole reason for lack of admission to the program. Criteria include the following:

- GRE scores at the 25th percentile or higher for both verbal and quantitative sections (candidates for the certificate program who already possess a master's degree in a related field from an accredited institution are exempt from the GRE requirement). Undergraduate grade point average of 2.75 or higher.
- Baccalaureate degree from a regionally accredited college/university.
- Professional resume.
- Hold or have held a valid teaching license or provide documentation of professional employment in the field.
- A two- to three-page written statement (double spaced) describing the applicant's professional background, the educational issues the applicant would like to address in the master's program and the applicant's long-term professional goals.
- Three years of full-time teaching (or equivalent) experience in a school setting.
- Recommendations from school personnel (administrative and instructional) familiar with the candidate's teaching performance and leadership potential.
- Faculty interview session results (to assess conceptual and oral performance).
- Writing samples provided by the candidate in response to questions administered by program faculty (to assess organizational and writing performance).
- Candidates may be required to complete several other tasks and activities which are designed to assess leadership ability and other skills and competencies as a part of the admissions, retention and program completion processes.
- The master's degree and certificate programs in educational leadership are designed for practicing school personnel who aspire to be educational leaders.

Program Mission and Outcomes

The master's degree in education with a concentration in educational leadership is designed to prepare candidates to assume leadership positions in both schools and district offices. The organizing theme for the program is the school/district administrator's central role as the interpreter, facilitator and initiator of educational change leading to effective schools for all children. The program focuses upon the principal within the context of the school community of students, parents, teachers, support staff and administration, and the district supervisor within the community of schools. It recognizes the constant state of mutual influence, which exists among schools and the organizations and culture of broader society. The educational leader must understand and interpret changes within this context that affect the mission and operation of schools. For example, as an interpreter of change, the administrator must be able to discern the meaning of modifications in financial support, school law, governmental policy and educational research, and communicate these changes to the staff and community. In the role of facilitator, the administrator must be able to effectively implement programs mandated by the school board, as well as nurture and support positive changes suggested by students, staff or parents. Finally, as the initiator of change, the administrator must provide leadership for the process of continuous school improvement.

The program is accredited by NCATE and the Commonwealth of Virginia and is nationally recognized by the Educational Leadership Constituent Consortium (ELCC).

Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by:

- developing, articulating, implementing, stewarding and promoting community involvement in a vision of learning for a school and school district (ELCC 1.1-1.5)
- communicating effectively orally and in writing (1.2)
- promoting a positive school culture (2.1-2.4)
- providing an effective instructional program based upon best practices (2.2-3)
- designing comprehensive professional growth plans (2.4)
- managing the organization and its operations and resources to promote a safe, efficient and effective learning environment (3.1-3.3)
- using the available technologies for providing and managing instruction and resources (2.2, 3.1-3.3)
- collaborating with families and other community members, responding to diverse community interests and needs, and mobilizing community resources (4.1-4.3)
- acting with integrity, fairly, and in an ethical manner (5.1-5.3)
- understanding, responding to and influencing the larger political, social, economic, legal and cultural context (6.1-6.3)

Candidates should have substantial, sustained, standards-based internship experiences in real settings, which are planned and guided cooperatively by the institution and the school district (7.1-7.6).

Completion Requirements

All candidates must pass a comprehensive examination and submit a portfolio before completing the concentration. The comprehensive examination is designed to assess attainment of the desired instructional outcomes of the concentration. Some offerings require prerequisites for enrollment. These requirements enable a systematic and developmental approach to preparing school administrators. The concentration is fully aligned with the standards mandated by the Virginia Department of Education.

Program Description

The program includes 36-39 graduate credit hours and is divided into three interlocking components: professional core courses, a set of key leadership courses, and a practicum or internship experience.

Additional Information

Successful completion of the Administrative Technology Portfolio may be substituted for ADSU 540.

Licensure Requirements

A candidate who has the appropriate teaching license, who completes the aforementioned program and who achieves a passing score on the School Leader's Licensure Examination is eligible for endorsement in PK-12 administration and supervision in the Commonwealth of Virginia.

Degree Requirements

Professional Core: 15 Credit Hours

EDUC 620. Changing Contexts of American Schools 3.00

EDUC 625. Evaluation in Education 3.00

EDUC 630. Inquiry in Education 3.00

EDUC 641. Learning Theories and Practice 3.00

EDUC 642. Curriculum Theory and Issues 3.00

Leadership Concentration: 18-21 Credit Hours

ADSU 540. Technology for Administrators 3.00 (may be waived with acquisition of Technology Skills notation on the teaching certificate)

ADSU 640. The Fundamentals of Educational Administration 3.00

ADSU 641. School Law 3.00

ADSU 642. Leadership for School-Community Relations 3.00

ADSU 643. The Principalship 3.00

ADSU 644. Supervision and Development of Personnel 3.00

ADSU 652. School Finance and Business Management 3.00

Practicum and Internship Experiences

ADSU 668. Internship for Principals 3.00 or ADSU 678. Full-Time Internship for School Administrators 3.00

Total: 36-39 Credit Hours

Education, Educational Technology Concentration for PreK-12, M.Ed.

The Master of Education degree (M.Ed.) with a concentration in educational technology for preK-12 serves students who work in, or who intend to pursue careers in preK-12 technology leadership positions in public and private school settings. The program provides candidates with opportunities to explore and research emerging technologies for learning using ISTE-C (Coach) standards as a guide to development in the profession. Candidates in the program will discover effective ways to integrate these technologies in their chosen professional settings in public or private schools. Graduates will possess a broad and deep understanding of the practice of educational design and technology.

Admission Criteria

All criteria are considered when reviewing the candidates for admission to the educational technology and educational technology for preK-12 M.Ed. degree concentrations. However, no one criterion will be the sole reason for lack of admission to the program. Students should meet the following criteria to be considered for admission:

- Undergraduate GPA of 3.0 or higher. If a 2.5 to 2.9 instead, conditional admittance will be considered.
- Bachelor's degree from a regionally accredited college/university (official transcripts required).
- Professional resume.
- Two professional letters of reference.
- Work experience is preferred.
- Two-three page written statement (double spaced) describing the student's professional background, the educational issues that the student would like to address in the master's program and long-term professional goals.
- Work samples: Two to three examples of how the student is designing and developing learning experiences, using technologies, etc.
- Online interview (to be scheduled once the application is received).
- \$55 application fee.

Outcomes

Candidates will demonstrate the knowledge, skills and dispositions to:

- Apply foundational knowledge and skills to the collaborative design and use of content, pedagogy and instructional technologies.
- Create conditions for learning by applying theories (e.g. learning theories, curriculum theory and communications theories) to authentic scenarios involving diverse populations.
- Use modern technologies and techniques (e.g. collaborative teamwork and rapid prototyping) to design and develop learning materials, media and environments that promote near and far transfer of content knowledge.
- Design and develop a strategic vision and plan for the implementation, management and evaluation of educational technologies, programs and systems.
- Use quantitative and qualitative methods of inquiry to make data-driven decisions that inform practice in the discipline.
- Initiate, lead, facilitate and advocate for positive change and innovation in the educational technology workplace as new technologies, techniques and theories of learning, design and change emerge.
- Engage in and reflect upon one's own professional development, dispositions and growth in the discipline.
- Analyze, develop and evaluate professional development programs and initiatives that advance the technological, pedagogical and content knowledge of learners.
- Engage in ethical reasoning and decision-making by applying frameworks, policies and standards of ethical practice such as the AECT and ISTE-C professional standards and the JMU Ethical Reasoning in Action Eight Key Questions framework for ethical decision-making.

Degree Requirements

To complete a Master of Education degree with a concentration in educational technology or educational technology for preK-12, the candidate will complete a minimum of 31 to 33 hours of course work to include an educational core, educational technology core and advanced courses. LTLE 675 may be waived in some cases with prior permission from the program director. Thirty-three credits are required for all students except those who are able to waive LTLE 675. Applied Research Design by showing acceptable written evidence of meeting the course competencies. In addition to course work, candidates must successfully complete key assessments during the program of study.

Educational Core: 6 Credit Hours

EDUC 630. Inquiry in Education 3.00

EDUC 641. Learning Theories and Practice 3.00

Educational Technology Core: 18 Credit Hours

LTLE 560. Foundations of Educational Technology 3.00

LTLE 565. Educational Technology Management 3.00

LTLE 570. Design and Development of Digital Media 3.00

LTLE 580. Developing and Critiquing Visual Literacy 3.00

LTLE 610. Principles of Instructional Design 3.00

LTLE 622. Professional Development in Educational Technology 3.00

Educational Technology Advanced Courses: 7-9 Credit Hours

LTLE 675 may be waived in some cases with prior permission from the program director. Students who do not take LTLE 675 will complete seven credits of educational technology advanced courses.

LTLE 675. Applied Research Design 1.00

LTLE 695. Applied Research 3.00

LTLE 698. Comprehensive Review Preparation 1.00

EDUC 642. Curriculum Theory and Issues 3.00

Total: 31-33 Credit Hours

Education, M.Ed., Educational Technology Concentration

The Master of Education degree (M.Ed.) with a concentration in educational technology serves students who work in, or who intend to pursue careers in, higher education, business, industry, government and consulting. The program provides candidates with opportunities to explore and research emerging technologies for learning using AECT professional standards as a guide to development in the profession. Candidates in the program will discover effective ways to integrate these technologies in their chosen professional settings. Graduates will possess a broad and deep understanding of the practice of educational design and technology.

Admission Criteria

All criteria are considered when reviewing the candidates for admission to the educational technology M.Ed. degree concentration. However, no one criterion will be the sole reason for lack of admission to the program. Students should meet the following criteria to be considered for admission:

- Undergraduate GPA of 3.0 or higher. If a 2.5 to 2.9 instead, conditional admittance will be considered.
- Bachelor's degree from a regionally accredited college/university (official transcripts required).
- Professional resume.
- Two professional letters of reference.
- Work experience is preferred.
- Two-three page written statement (double spaced) describing the student's professional background, the educational issues that the student would like to address in the master's program and long-term professional goals.
- Work samples: Two to three examples of how the student is designing and developing learning experiences, using technologies, etc.
- Online interview (to be scheduled once the application is received).
- \$55 application fee.

Outcomes

Candidates will demonstrate the knowledge, skills and dispositions to:

- Apply foundational knowledge and skills to the collaborative design and use of content, pedagogy and instructional technologies.
- Create conditions for learning by applying theories (e.g. learning theories, curriculum theory and communications theories) to authentic scenarios involving diverse populations.
- Use modern technologies and techniques (e.g. collaborative teamwork and rapid prototyping) to design and develop learning materials, media and environments that promote near and far transfer of content knowledge.
- Design and develop a strategic vision and plan for the implementation, management and evaluation of educational technologies, programs and systems.
- Use quantitative and qualitative methods of inquiry to make data-driven decisions that inform practice in the discipline.
- Initiate, lead, facilitate and advocate for positive change and innovation in the educational technology workplace as new technologies, techniques and theories of learning, design and change emerge.
- Engage in and reflect upon one's own professional development, dispositions and growth in the discipline.
- Analyze, develop and evaluate professional development programs and initiatives that advance the technological, pedagogical and content knowledge of learners.
- Engage in ethical reasoning and decision-making by applying frameworks, policies and standards of ethical practice such as the AECT and ISTE-C professional standards and the JMU Ethical Reasoning in Action Eight Key Questions framework for ethical decision-making.

Degree Requirements

To complete a Master of Education degree with a concentration in educational technology, the candidate will complete a minimum of 31 to 33 hours of course work to include an educational core, educational technology core and advanced courses. LTLE 675 may be waived in some cases with prior permission from the program director. Thirty-three credits are required for all students except those who are able to waive LTLE 675. Applied Research Design by showing acceptable written evidence of meeting the course competencies. In addition to course work, candidates must successfully complete key assessments during the program of study.

Educational Core: 6 Credit Hours

EDUC 630. Inquiry in Education 3.00

EDUC 641. Learning Theories and Practice 3.00

Educational Technology Core: 18 Credit Hours

LTLE 560. Foundations of Educational Technology 3.00

LTLE 565. Educational Technology Management 3.00

LTLE 570. Design and Development of Digital Media 3.00

LTLE 580. Developing and Critiquing Visual Literacy 3.00

LTLE 610. Principles of Instructional Design 3.00

LTLE 622. Professional Development in Educational Technology 3.00

Educational Technology Advanced Courses: 6 Credit Hours

LTLE 675 may be waived in some cases with prior permission from the program director. Students who do not take LTLE 675 will complete four credits of educational technology advanced courses.

LTLE 675. Applied Research Design 1.00 ¹

LTLE 695. Applied Research 3.00

LTLE 698. Comprehensive Review Preparation 1.00

One special topics course required (3 Credit Hours):

LTLE 611. User Interface Design 3.00

LTLE 625. Advanced Video and Audio Production 3.00

LTLE 631. Data Visualization 3.00

LTLE 645. Games, Simulations and Virtual Worlds for Learning 3.00

LTLE 650. eLearning Design 3.00

LTLE 655. Evaluation of eLearning 3.00

Total: 31-33 Credit Hours

Footnote

¹ LTLE 675 will be offered for 2 credit hours.

Education, M.Ed., Equity and Cultural Diversity Concentration

The Master of Education degree (M.Ed.) with a concentration in equity and cultural diversity provides current educators or other professionals programming in educational theory and practice that emphasize diversity. Core courses examine educational research, learning theory, curriculum development and contemporary issues in education, enabling participants to critically analyze policies, practices and procedures in American K-12 schools with an understanding of the cultural, social and political context of these institutions.

The cultural diversity core courses emphasize language diversity and explore the intersection of language and culture in theory and practice. Understanding second language acquisition, socio-cultural variables that impact student learning and factors that shape immigrants' learning experiences will aid participants in creating effective school programs and educational services to meet the needs of culturally diverse individuals. The cultural diversity core includes a practicum at the College of Education Career Development Academy assisting and interacting with first generation immigrant adult learners and their family members. To provide some flexibility in meeting individual candidate goals, the program also offers electives to be selected by the student with advisor approval. These courses must aid the candidate in his or her understanding of diversity and may be courses within or

outside of the College of Education at the 500 or 600 level. By giving candidates course options, they can shape their program of study to assist them in multiple career options such as diversity leadership positions in academic institutions, public schools, and federal and state agencies.

Admission Criteria

All criteria are considered with reviewing the candidates for admission to this Master of Education degree program. However, no one criterion will be the sole reason for lack of admission to the program. Criteria include:

- Bachelor's degree from an accredited college/university.
- An undergraduate GPA of 3.0 or higher.
- The Graduate Record Exam (GRE) or the Miller's Analogy Test (MAT) is required only for individuals who do not have an undergraduate degree of 3.0 or higher.
- Professional resume.
- A two-to-three page written statement (double-spaced) describing the applicant's professional background, the educational issues that the applicant would like to address in the master's program and the applicant's long-term professional goals.
- Evidence of the candidate's skills or experiences that may help promote and affirm cross-cultural learning or awareness.
- Informal interview with at least one of the program's faculty members to ensure the applicant understands the goals and requirements of the M.Ed. in Education with a concentration in Equity and Cultural Diversity.
- Two professional reference letters.

Admission Steps

- Meet or talk with a program adviser to discuss your interests and goals in earning the M.Ed. in Education with a concentration in Equity and Cultural Diversity.
- Apply to The Graduate School by completing the online application for obtaining the graduate degree-Master of Education with a concentration in equity and cultural diversity. Required documents include official transcripts from all colleges and universities attended, written statement, two professional references, and professional resume.

Graduation

All requirements for the degree must be completed by the course work completion deadline in the semester in which the degree is conferred to receive a diploma dated the day of graduation. Applications for graduation should be completed early in the term in which the candidate plans to graduate. Candidates who will satisfy all degree requirements in the summer may participate in the spring commencement ceremony if they have completed an Application for Graduation form signed by their adviser and program coordinator, and they must be pre-registered for summer classes prior to the May commencement ceremony. Candidates must be enrolled during the semester in which the degree is to be conferred. It should be noted that applicants actually graduate and receive their degrees only when all requirements are satisfied. Candidates who do not satisfy all requirements for graduation will be notified of deficiencies and must re-apply for a later graduation date.

Degree Requirements

Professional Core: 9 Credit Hours

EDUC 630. Inquiry in Education 3.00

EDUC 641. Learning Theories and Practice 3.00

EDUC 642. Curriculum Theory and Issues 3.00

Cultural Diversity Core: 15 Credit Hours

TESL 525. Cross Cultural Education 3.00

EDUC 620. Changing Contexts of American Schools 3.00

TESL 626. Concepts of First and Second Language Acquisition 3.00

TESL 628. Assessment and Curriculum Development in English as a Second Language 3.00

TESL 648. Immigration and Education 3.00

Research Requirements: 4-6 Credit Hours

TESL 695. Applied Research 3.00

TESL 683. Research and Reading in TESOL 1.00-3.00 or TESL 700. Thesis 1.00-3.00

Electives: 6 Credit Hours (Selected with an adviser's approval.)

Examples may include:

EDUC 625. Evaluation in Education 3.00

ADSU 641. School Law 3.00 or other 500 or 600 TESL courses or English literature and history courses that add to the student's understanding of our diverse society (with instructor approval)

Total: 34-36 Credit Hours

Education, M.A.T., Inclusive Early Childhood Education (Birth - Grade 3)

The inclusive early childhood program draws heavily from research and theories in child development, family systems, special education, differentiated teaching and learning. Through course work and extensive field experiences, the teacher candidate is prepared to design activities that have an interdisciplinary focus, reflect an understanding of the individual child's development and learning, recognize the importance of family and developmental influences, support the young child in constructing knowledge about self and the world, and involve parents in supporting the child's growth and development.

The Master of Arts in teaching (M.A.T.) program in inclusive early childhood education is a continuation of the undergraduate IECE program and prepares candidates for licensure in Early Childhood Special Education (Birth to 5 years) and Early Childhood Education (PK-3rd grade).

Student Teaching

Candidates must apply to student teach one year prior to their student teaching semester. At that time, students must be fully accepted into teacher education, be admitted unconditionally to graduate school and have a 3.0 graduate GPA.

Graduate Courses

Candidates beginning the graduate portion of the program must meet all Graduate School requirements and criteria for admission; it is expected that students will complete the admission process during their senior year. In addition, students must meet all graduate level graduation requirements.

Courses

IECE 612. Effective Teaching in Early Childhood Education 3.00

IECE 613. Practicum in the Education of Young Children 3.00

IECE 614. Individualized Behavior Intervention for Young Children 3.00

IECE 632. Creativity and Play 3.00

EXED 625. Medical and Technological Aspects of Working with Children with Significant Medical Needs 3.00

IECE 620. Seminar in Inclusive Early Childhood Education Student Teaching 3.00

IECE 680. Student Teaching in Inclusive Early Childhood Education 6.00

Total: 30 Credit Hours

Education, M.Ed., Middle School Education (Grades 4-8) Concentration

The M.Ed. program in middle education is not accepting students at this time.

Education, M.A.T., Middle School Education (Grades 6-8) Concentration

Admission Criteria

To be considered for admission to the Middle Education M.A.T. degree program, candidates must have:

- Satisfied all requirements for admission to teacher education.
- Submitted Virginia passing Praxis Subject Assessment scores for at least one content area to the JMU Education Support Center prior to beginning more than six hours of M.A.T. graduate coursework.
- Submitted Virginia passing Praxis Subject Assessment scores in two content areas to the JMU Education Support Center prior to beginning more than 12 hours of M.A.T. graduate course work.
- Exhibited and demonstrated personal qualities and dispositions that reflect effective development as a professional educator.
- Satisfied all requirements for admission to The Graduate School, including:
- Completion of a baccalaureate degree in IDLS from JMU or its equivalent
- An undergraduate cumulative GPA of 2.7 or higher (on a 4.0 scale)

Post-baccalaureate students must submit Virginia passing scores on the Praxis Subject Assessment for both intended licensure areas and passing scores on the Virginia Communication and Literacy Assessment upon application to JMU.

All candidates in the middle school education M.A.T. program must have an undergraduate major or its equivalent in interdisciplinary liberal studies (IDLS) from JMU. The IDLS program, with its expanded approach to the general education core, and its dual concentrations in English, social sciences, the natural sciences or mathematics, meets the licensure requirements for a two-subject endorsement for teachers licensed in middle school education.

Program Mission and Outcomes

The mission of the middle school education M.A.T. program is to prepare highly qualified professionals for educational roles in middle schools through advanced coursework and field experiences.

These school professionals will:

- design and deliver curricula that effectively impact student learning;
- integrate technology in learning settings;
- value diversity of faculty and students in the school;
- collaborate with colleagues, parents and others;
- be reflective practitioners who continually evaluate their actions; and
- value lifelong learning, engage in professional development and conduct educational research.

The Master of Arts in Teaching in middle school education is designed to lead to initial teacher licensure with endorsements in two content areas. The fifth-year format forms the last phase of the five-year teacher licensure programs. This format is designed to serve candidates who have completed the appropriate prerequisite requirements in an undergraduate education program at JMU. Candidates should check with their adviser frequently to be apprised of changes in the offerings and requirements listed that may affect them.

Post-Baccalaureate Entry Option

This program is for candidates who hold a bachelor's and/or master's degree in an appropriate academic content area and wish to be licensed to teach in that area.

Additional Admission Information

Candidates admitted to this program of study are expected to have completed an arts and sciences undergraduate major from an accredited college or university with a 2.7 grade-point average or above (on a 4.0 scale). Candidates are required to provide transcript evidence that they have completed liberal studies and specialty area courses comparable in content and total hours to those expected of an undergraduate major at JMU. Candidates in the middle education program must have the requisite content coursework in two areas (mathematics, sciences, language arts, social science). Those applicants not having such coursework will be required to complete any specifically required undergraduate-level general education and/or subject matter content courses under terms of provisional admission to graduate study as a non-degree-seeking candidate.

Candidates must also submit Virginia passing scores on the Virginia Communication and Literacy Assessment (VCLA) and Praxis Subject Assessment in the intended licensure areas and meet all requirements of admission to The Graduate School. Candidates must complete all undergraduate middle education and content area prerequisite coursework prior to enrolling in M.A.T. graduate coursework.

Candidates must also apply to and be admitted to teacher education at JMU. Candidates must initiate their application by contacting the Department of Middle, Secondary and Mathematics Education. Criteria for admission to teacher education are described in the Undergraduate Catalog.

Degree Requirements

As undergraduates, candidates must first complete 37 credit hours of middle education pre-professional course work along with the IDLS major. All middle education pre-professional course work must be completed with grades of "B-" or better with the exception of PSYC 160 which must be completed with a grade of "C" or better. Candidates must apply to and be admitted to graduate school for the Middle Education M.A.T. program (see Admission Criteria). Finally, candidates must complete 32 hours of graduate course work which includes student teaching and a final research project.

Undergraduate Degree Requirements

First and/or Second Year

EDUC 300. Foundations of American Education *3 Credit Hours* (must be completed with a grade of "B-" or higher)

MSSE 101. Orientation to the Profession *1 Credit Hour*

PSYC 160. Life Span Human Development *3 Credit Hours*

Third Year

The following courses must be completed with grades of "B-" or higher:

EDUC 310. Teaching in a Diverse Society *3 Credit Hours*

MIED 311. Field Experience in Middle Education *2 Credit Hours*

READ 312. Reading and Writing across the Curriculum in the Middle Grades *3 Credit Hours*

(EDUC 310, MIED 311, and READ 312 are corequisites for middle education pre-professional students)

MSSE 370. General Instructional Methods for Grades 6-12 *3 Credit Hours*

MSSE 371. Clinical Experience in Adolescent Education *1 Credit Hours*

(MSSE 370 and MSSE 371 are corequisites for middle education pre-professional students)

Fourth Year

READ 472. Literacy, Assessment, and Instruction in Content Areas for the Middle Grades *3 Credit Hours*

EXED 460. Differentiation of Instruction *3 Credit Hours*

Students complete two of the courses below based on their IDLS concentration areas (3 credits each): 6 Credit Hours

MSSE 470E. Methods in English/Language Arts for the Middle School

MSSE 470H. Methods in Social Studies for the Middle School
MSSE 470S. Methods in Science for the Middle School
MSSE 470M. Methods in Mathematics for the Middle School

Students complete the following course twice based on their IDLS concentration areas (3 credits each): 6 Credit Hours
MSSE 471. Field Experience in Middle Education
Total: 37 Credit Hours

Graduate Course Requirements

The following courses must be completed with grades of "B-" or higher:

EDUC 540. Educational Technology 3.00
EXED 512. Behavior Management in the Classroom 3.00
MSSE 630. Research for Practitioners 3.00
MIED 620. Assessment in Middle Education 3.00
MSSE 650. Internship Seminar 3.00

MSSE 690. Internship in Middle Education 4.00 (Course to be taken twice for a total of 8.00 credit hours)
MIED 610. Collaborative Leadership in Schools 3.00
MIED 656. Seminar in Middle Education 3.00
Approved Graduate Level Elective 3 Credit Hours
Total: 32 Credit Hours

Education, M.A.T., Secondary Education (Grades 6-12) Concentration

Admission Criteria

To be considered for admission to the secondary education M.A.T. degree program, candidates must have:

- Satisfied all requirements for admission to teacher education.
- Submitted Virginia passing Praxis Subject Assessment scores to the JMU Education Support Center prior to beginning more than 12 hours of MAT graduate course work.
- Exhibited and demonstrated personal qualities and dispositions that reflect effective development as a professional educator.
- Satisfied all requirements for admission to The Graduate School, including:
- Completed requirements for a baccalaureate degree from an accredited college/university
- Achieved an undergraduate cumulative GPA of 2.7 or higher (on a 4.0 scale)

Post-baccalaureate students must submit Virginia passing scores on the Praxis Subject Assessment for the intended licensure area and passing scores on the Virginia Communication and Literacy Assessment upon application to JMU.

This program is intended for JMU candidates continuing from the undergraduate pre-professional secondary education program. The secondary education Master of Arts in Teaching degree is designed to enable candidates to develop a strong professional education on a foundation of undergraduate preparation in General Education, an appropriate major and introductory professional education experiences.

Program Mission

The secondary education Master of Arts in Teaching degree emphasizes the preparation of effective and reflective teachers who are knowledgeable in the content they are preparing to teach and cognizant of the characteristics of adolescents, ages 12-18. The licensure areas for which individuals are prepared include English, mathematics, natural sciences (biology, chemistry, earth and space science, physics), and history and social sciences (includes licensure to teach history, economics, geography and political science).

Undergraduate candidates and post-baccalaureate candidates planning to teach at the secondary level (grades 6-12) should consult with a secondary education adviser to ensure completion of the required prerequisites. Candidates should visit the departmental office in 3200 Memorial Hall to be assigned a secondary education adviser. A specific arts and sciences major or equivalent course work and experiences may be required for admission to some programs of the M.A.T. and for licensure to teach in certain disciplines and grade levels. Candidates should check with their adviser frequently to be apprised of changes in the offerings and requirements listed that may affect them.

The fifth-year licensure programs build on the extensive foundational course work and experiences candidates have completed in their undergraduate programs. Candidates will have completed the prescribed course work to develop the knowledge, skills, attitudes and behaviors needed for successful completion of the M.A.T.

Candidates interested in the requirements for the M.A.T. program in physical and health education (PreK-12) should refer to the description for that program in the Department of Kinesiology. Candidates interested in the requirements for the secondary licensure program in foreign languages should refer to the description for that program in Department of Foreign Languages, Literatures and Cultures in the undergraduate catalog.

Degree Requirements

Although individual candidate's programs of study will vary depending upon major and licensure area, the following represents the breakdown of the required credits in a typical program of study. The program of study for secondary education is as follows.

Undergraduate Requirements

Undergraduate candidates in the secondary education pre-professional program must complete an arts and sciences major or equivalent in a specific discipline related to the teacher licensure area of intent. Majors related to approved licensure areas at JMU include biology, chemistry, English, Earth-science, history or political science, mathematics and physics. Candidates with majors in history or political science must also complete course work in the interdisciplinary social science minor. Students must earn grades of "C-" or better in all academic major content courses.

Post-Baccalaureate Entry Option

This program is for candidates who hold a bachelor's and/or master's degree in an appropriate academic content area and wish to be licensed to teach in that area.

Additional Admission Information

Candidates admitted to this program of study are expected to have completed an arts and sciences undergraduate major from an accredited college or university with a 2.7 grade-point average or above (on a 4.0 scale). Candidates are required to provide transcript evidence that they have completed liberal studies and specialty area courses comparable in content and total hours to those expected of an undergraduate major at JMU. Candidates in the middle education program must have the requisite content coursework in two areas (mathematics, sciences, language arts, social science). Those applicants not having such coursework will be required to complete any specifically required undergraduate-level general education and/or subject matter content courses under terms of provisional admission to graduate study as a non-degree-seeking candidate.

Candidates must also submit Virginia passing scores on the Virginia Communication and Literacy Assessment (VCLA) and Praxis Subject Assessment in the intended licensure areas and meet all requirements of admission to The Graduate School. Candidates must complete all undergraduate middle education and content area prerequisite coursework prior to enrolling in M.A.T. graduate coursework.

Candidates must also apply to and be admitted to teacher education at JMU. Candidates must initiate their application by contacting the Department of Middle, Secondary and Mathematics Education. Criteria for admission to teacher education are described in the Undergraduate Catalog.

Undergraduate Prerequisites

Minimum requirement is 120 credit hours.

General Education 41-44 *Credit Hours*

Major field of study 36-60 *Credit Hours*

Undergraduate pre-professional studies 23 *Credit Hours*

Total: 100-127 Credit Hours

Undergraduate Prerequisites – First and/or Second Year

PSYC 160. Life Span Human Development 3 *Credit Hours*

MSSE 101. Introduction to the Profession 1 *Credit Hours*

EDUC 300. Foundations of American Education 3 *Credit Hours* (must be completed with a grade of "B-" or higher) 3 *Credit Hours*

Total: 7 Credit Hours

Undergraduate Prerequisites – Third and Fourth Years

The following courses must be completed with grades of "B-" or higher:

EDUC 310. Teaching in a Diverse Society 3 *Credit Hours*

Graduate Course Requirements

The following courses must be completed with grades of "B-" or higher:

EDUC 540. Educational Technology 3.00

EXED 512. Behavior Management in the Classroom 3.00

EXED 520. Differentiation of Instruction and Assessment to Meet the Needs of Diverse Learners 3.00

MSSE 570. Content Methods Course for High School

MSSE 571. Content Area Field Experience in High School

(MSSE 570 and MSSE 571 are corequisites)

MSSE 370. General Instructional Methods for Grades 6-12 3 *Credit Hours*

MSSE 371. Clinical Experience in Adolescent Education 1 *Credit Hours* (EDUC 310, MSSE 370, and MSSE 371 are corequisites)

MSSE 470. Content Methods for the Middle School 3 *Credit Hours*

MSSE 471. Field Experience in the Middle School 3 *Credit Hours*

READ 440. Literacy-Based Learning in Secondary Education 3 *Credit Hours*

(MSSE 470, MSSE 471 and READ 440 are corequisites)

Total: 16 Credit Hours

MSSE 607. Middle and Secondary Curriculum and Co-Curriculum 3.00

MSSE 625. Assessment in Secondary Education 3.00

MSSE 630. Research for Practitioners 3.00

MSSE 650. Internship Seminar 3.00

MSSE 675. Internship in Middle and Secondary Education 4.00 (x2 = 800)

(MSSE 650 and MSSE 675 are corequisites)

Total: 35 Credit Hours

Education, M.Ed., Secondary Education (Grades 6-12) Concentration

The M.Ed. program in secondary education is not accepting new students at this time.

Education, M.A.T., Teaching English to Speakers of Other Languages (TESOL)

The M.A.T. with a concentration in TESOL program is designed for individuals who have earned a bachelor's degree in a liberal arts discipline closely associated with a teaching area (e.g., biology, history, mathematics, psychology, chemistry, English, etc. but not business administration, nursing, engineering, etc.) and want to complete teacher licensure. This program draws on theories of linguistics, research on social and cultural variables that influence second language acquisition, and the knowledge required to facilitate second language learning. The TESOL program will prepare future educators to understand and implement equitable and effective ways of working with English Language Learners in a variety of contexts, including content/general education classes, sheltered-ESL classes and pullout classes. Completion of this MAT program leads to eligibility for a Virginia teaching license for PreK-12 English as a Second Language.

The degree requires the following:

- PSYC 160. Human Development Across the Life Span, or equivalent
- WRTC 103. Critical Reading and Writing, or equivalent
- MATH designated course
- ENG 308. Introduction to Linguistics, or equivalent
- EDUC 300. Foundations of American Education, or equivalent
- READ 366/LED 566. Early Literacy Development and Acquisition (with a 1 credit practicum, TESL 384/TESL 553)
- Foreign language proficiency (6 credits at intermediate level)
- 37-39 graduate hours of TESOL course work
- Applicants' undergraduate transcripts are reviewed to identify necessary prerequisite course work and to verify content knowledge requirements.

Application for the M.A.T. with a concentration in Teaching English to Speakers of Other Languages Initial Licensure Program is a three-step process.

Step 1: Transcript Review and Interview

Schedule a meeting with a TESOL adviser to review your undergraduate transcripts, discuss your interest/goals in completing the M.A.T. in Education with a Concentration in TESOL, and review your resume to determine eligibility and any prerequisite courses needed. Candidates may need to complete prerequisite competencies required by the Commonwealth of Virginia for licensure.

Bring/or email the following items:

- Undergraduate transcripts to show earned baccalaureate degree from a regionally accredited college/university (unofficial transcripts are sufficient for initial review process)
- Undergraduate grade point average of 3.00 or higher
- A professional resume

Step 2: Apply to Graduate School

Complete the online application for obtaining the graduate degree Master of Arts in Teaching with a concentration in TESOL (M.A.T. in Education with a concentration in TESOL).

Required for application:

- Official transcripts from all colleges or universities attended
- An undergraduate GPA of 3.0 or higher
- The Graduate Record Exam (GRE) or the Miller's Analogy Test (MAT) is required only for individuals who do not have an undergraduate GPA of 3.0 or higher
- Two-three page essay which describes relevant work, life experiences and professional goals related to TESOL and assisting English language learners.
- Two professional references
- Professional resume

Your application to The Graduate School, if accepted, will likely be "conditionally" accepted. After all conditions have been met, including acceptance into Teacher Education (Step 3), your status can be upgraded to "unconditional." Conditions are specified in your acceptance letter. It is your responsibility to let your adviser know when you have been accepted.

Print the Graduate Status Change Request, add your name and student ID number, and bring it to your adviser/program director for a signature.

Step 3: Apply to Teacher Education

After you have been admitted to the Graduate School and have received your student ID, you should apply for admission to Teacher Education. Your application to Teacher Education through JMU's Education Support Center (ESC) is the first step in the process of obtaining your Virginia State Teaching License.

Required for application:

- Undergraduate grade point average of 2.5 or higher
- Passing scores on Praxis CORE or passing scores on SAT/ACT or other appropriate exams
- Completion of online application form
- Adviser's signature on printed copy of application. Bring the printed form to your adviser and return signed form to the Education Support Center (ESC)
- Completion of additional requirements for admission to teacher education may be found at: <https://www.jmu.edu/coe/esc/admission-licensure.shtml>

If you are not a JMU graduate, you must provide a copy of your final undergraduate transcript to the Education Support Center after you have submitted your application. Submit transcripts of all additional content courses, those specified as "conditions" in your Graduate letter of acceptance, to the Education Support Center. Candidates need to show completion with a grade of C or above in PSYC 160, WRTC 103, MATH designated course, ENG 308, EDUC 300 and READ 366/LED 566 with TESL 384/TESL 553 or equivalent courses. Candidates must demonstrate modern foreign language proficiency at the intermediate level by completion of six credits of course work at that level with a grade of "C" or above or by successful completion of a foreign language examination approved by program faculty.

Additional Information

Consult with the academic adviser or Dr. Stephanie Wasta, director of the graduate TESOL program, to ensure awareness of any changes to requirements. Refer to the College of Education website for additional program information at <http://www.jmu.edu/coe/>.

Degree Requirements

Professional Education Courses

EXED 512. Behavior Management in the Classroom *3.00*

EDUC 540. Educational Technology *3.00*

TESOL Courses

TESL 525. Cross Cultural Education *3.00*

TESL 615. Integrated Language and Content Instruction *3.00* (corequisite TESL 550)

TESL 626. Concepts of First and Second Language Acquisition *3.00* (corequisite TESL 551)

TESL 628. Assessment and Curriculum Development in English as a Second Language *3.00*

LED 635. Literacy Development and Instruction for English Language Learners *3.00* (corequisite TESL 552)

Licensure Field Experience in TESOL

TESL 550. Practicum in TESOL Instructional Strategies *3.00*

TESL 551. Practicum in TESOL 1st/2nd Language Acquisition *1.00*

TESL 552. Practicum in TESOL Literacy Development *1.00*

TESL 681. Student Teaching (2-8 week blocks at PreK-12 levels) *6.00* (2-8 week blocks at PreK-12 levels)

EDUC 682. Professional Development, Partnership and Advocacy *3.00*

Research

TESL 683. Research and Reading in TESOL *1.00-3.00*

TESL 695. Applied Research *3.00*

Total: 37-39 Credit Hours

English, M.A.

Academic Unit Head

Dr. Dabney Bankert

Location: 215 Keezell Hall, MSC 1801

Phone: (540) 568-6170

Website: http://www.jmu.edu/english/grad_welcome.html

Graduate Program Director

Dr. Brooks Hefner

Professors

D. Bankert, K. Castellano, M. Favila, A. Federico, J. Gabbin, B. Johnson, L. Kutchins, R. Majors, D. Mookerjee-Leonard, M. Parker, M. Rebhorn

Associate Professors

P. Bogard, E. Cavanagh, S. Cote, A. Fagan, M. Godfrey, D. Goode, B. Hefner, L. Henigman, B. Muhonja, M. Rankin, M. Thompson, S. White

Assistant Professors

D. Babcock, D. Lo, S. Samatar, G. Wrenn

Admission Criteria

Applicants are responsible for assuring that all materials have been received by the February 1 deadline. If any documents are likely to arrive after this deadline, please contact the Director of Graduate Studies as accommodation is possible in such cases.

To Apply

It is crucial that applicants read and follow instructions on both the Department of English and Graduate School websites carefully. Prospective applicants should visit The Graduate School website for information about the application process. Specific questions should be directed to the Director of Graduate Studies in English.

Applicants must apply online at <http://www.applyweb.com/apply/jmug>.

Follow the instructions on that site for submitting all application materials (transcripts, letters of recommendation, personal statement, writing sample, resume, etc.). Note that letters of recommendation, personal statement, writing sample and resume may also be sent directly to the English Department at the address below, although we encourage use of the online system. GRE scores, transcripts and application must be uploaded to The Graduate School online application site. Questions about the online application process should be directed to The Graduate School.

An online recommendation form is provided, however, the English department prefers and strongly encourages applicants to ask references for a detailed letter addressing the applicant's preparation for graduate study; motivation; maturity; reading, writing, and analytical skills; and particular areas of strength and weakness. Letters of recommendation may be uploaded to the online application site or, if the recommender prefers, sent directly to the graduate director at the following address:

Dr. Brooks Hefner
James Madison University, Director of Graduate Studies, Department of English
210 Keezell Hall, MSC 1801
921 Madison Drive
Harrisonburg, VA 22807
(540) 568-6994

Prospective applicants are welcome to communicate directly with the Department of English's director of graduate studies, and prospective students are encouraged to visit campus and attend a seminar with advance notice. An interview with the graduate director is also recommended but not required.

Required Materials

- Transcripts from all undergraduate and graduate programs.
- At least two letters of recommendation from faculty familiar with the applicant's academic performance and potential for graduate work. Additional letters may be sent if relevant to a candidate's application.
- If an applicant has been out of school for some time, he or she should contact the graduate director for advice about appropriate recommenders.
- A substantial academic writing sample of 10-20 pages, showing the applicant's strongest work and potential for literary research.
- A statement of approximately 500 words articulating the applicant's specific research interests, academic training, goals for graduate study and career aspirations, as well as the applicant's reasons for applying to the JMU Department of English graduate program.
- A resume is strongly recommended (this might include academic information, employment history, publication(s), research interests and skills not provided in other application materials).
- Any additional materials that offer the committee information about an applicant's suitability and preparation for graduate study.
- Graduate Record Examination General Test (GRE) scores are optional and not required for admission.

Evaluation Measures

The graduate committee considers the overall strength of an application rather than focusing on fixed requirements. The committee reads and evaluates all completed applications. They consider all available material to help us judge whether a student is prepared for and capable of successful work on the graduate level, stressing the importance of a solid personal statement that is specific and focused as well as a writing sample that demonstrates strong intellectual and interpretive capabilities, facility with literary research, and excellent writing skills.

In addition to satisfying all admission requirements of the JMU graduate school, applicants must meet the requirements of the English department, which include the following:

- A minimum overall GPA of 3.0 and a minimum GPA of 3.5 in English courses is recommended.
- At least 15 credit hours in upper-division English courses showing some breadth of study are recommended. The committee may favorably acknowledge more diverse backgrounds (such as a concentration in creative writing, an English minor or another major in the humanities), but may specify provisions for admittance (such as additional prerequisite undergraduate courses), to assure that the student is adequately prepared for graduate seminars.
- A writing sample that demonstrates strong intellectual and interpretive capabilities, facility with literary research and excellent writing skills.
- A personal statement that details the applicant's specific research interests, academic training, goals for graduate study and career aspirations, as well as the applicant's reasons for applying to the JMU Department of English graduate program. We recommend that applicants seek guidance on how to write effective personal statements from faculty at their home institutions.

Application Deadlines

Admission is offered for fall semester only; however, a student may discuss with the graduate director the possibility of taking seminars as a non-degree candidate prior to application to the program. Students may transfer up to 9 credit hours into the graduate program if they receive a grade of "B" or better in the seminars and are admitted to the program.

Complete applications must be received by February 1 for full consideration. If any documents are likely to arrive after this deadline, please contact the Director of Graduate Studies as some accommodation is possible in such cases. For non-degree applicants only, this deadline is flexible. Please consult with the graduate director for more information.

Funding

All applicants are automatically considered for funding; no additional application is required. See the Financial Support tab on the English department website (<http://www.jmu.edu/english/graduate/financial.shtml>) for more information about allocation of assistantships.

Application Review Procedure and Timetable

The graduate committee begins review of all complete applications after February 1. The number of applications and committee members' workload affects the time necessary to review applications, to rank applicants and to make offers, however, faculty members try to complete the review in a month's time. Candidates are welcome to contact the graduate director for information about the application's progression after three weeks or at any time if the candidate has received other offers and needs to make an earlier decision.

Note: Students must achieve unconditional status before applying for admission to candidacy.

Mission

The English department emphasizes preparation for Ph.D. work and advanced training both for secondary education teachers and those for whom an M.A. in English would enhance career options. We welcome students who, for whatever reasons, are eager to read literature on an advanced level, who enjoy research and writing, and who appreciate the responsibilities and pleasures of pursuing one's intellectual goals within an academic community.

Goals

- To excite and maintain in students a permanent desire for an expanded knowledge and understanding of the world through the study of diverse authors and genres.
- To help students to discover and appreciate the English language, and to learn how richly language clothes our responses to the world.
- To actively promote, through formal study, both the self-examination and the imaginative understanding that are among the central values of advanced study in the humanities.
- To encourage in post-baccalaureate students a broader, more formal inquiry into specific authors and movements in both western and non-western literatures, and to teach them by example the professional practices of reading and interpretation.
- To cultivate the practical talents gained by the study of literature: the ability to recognize the functions of analysis and synthesis in one's professional life; to construct an argument; to think critically; to write efficiently, clearly, and gracefully; to develop confidence in the validity of one's judgments about many kinds of writing; and to learn to see the interstices as well as the architectural whole in widely different encounters with the written word.
- To stimulate the kind of intellectual self-scrutiny and the passion for reading that will lead to successful work on the doctoral level, and to help students gain admittance into excellent Ph.D. programs throughout the country.
- To provide an opportunity for qualified students who are considering teaching as a career to work with faculty in undergraduate courses or to teach their own first-year composition class through the awarding of graduate and teaching assistantships.
- To foster in those who are interested in pursuing careers in writing and editing, politics, business, nonprofit work or other less obviously English-related fields the kinds of attention and analysis that are concomitant with the formal study of vastly different kinds of writing – fiction, poetry and drama, argumentation and analysis, opinion, review essays and creative nonfiction.
- To both broaden and deepen the needed practical knowledge of the fields of writing, literature and literary history for future English teachers in high schools, business schools and community colleges.
- To offer career teachers of English a place to improve their knowledge of these fields and rejuvenate their commitment to the study and teaching of literature.
- To enhance the professional opportunities of career teachers of English through advanced study.

The JMU graduate faculty in English is committed to the belief that encountering and interacting with literature, thinking critically about texts, learning the skills of scholarly research, and writing about one's ideas effectively provide the kind of education from which the world continues to benefit.

To fulfill these beliefs, we offer students a superior faculty who are recognized for their scholarship, their excellence in teaching and their supportive relationships with graduate students. All classes are in small seminar format with a maximum enrollment of 15 students.

The Department of English offers the Master of Arts degree.

Degree Requirements

The minimum requirement for the Master of Arts degree is 33 hours of graduate credit in English. All students must take ENG 600. Research Methods, in their first semester. Completion of the second year of a college foreign language course or passing an examination demonstrating intermediate competency in a foreign language is required for all students of the Master of Arts degree. Toward the end of their course work, students must pass a formal M.A. examination, the details of which are available on the English, Department of.

All students should plan a program of study with the director of graduate studies in English before registering for graduate courses in English. In addition, each student meets with the graduate director for a mid-semester progress conference during the student's first semester; after the first semester regular progress conferences are strongly encouraged.

Health Sciences, M.S.

Department of Health Professions

Phone: (540) 568-7658

Website: <http://healthprof.jmu.edu>

Academic Unit Head

Dr. Kirk Armstrong

Professors

H. Amato, P. Maxwell, J. Wenos

Associate Professors

J. Akers, R. Dorne, J. Frye, S. Maiewski, C. Peterson, A. Temple, D. Torisky, G. Weniger

Assistant Professors

A. Dengo-Flores, K. Liskey, A. Massey, A. Russell Yun, W. Simmons, A. Skelly, J. Walsh, X. You

Instructors

K. Harrison, E. Richardson

Lecturer

M. Daniels

Dietetics Concentration

Graduate Program Director: Dr. Jeremy Akers Email: akersjd@jmu.edu

This program is not accepting new students for the 2019-20 academic year. Please check with the program director for updates.

A Master of Science degree in health sciences may be pursued with a concentration in dietetics. The program includes course work in advanced nutrition, topics in foods, professional issues in dietetics, management in dietetics settings, research methods, nutrition and disease, nutrigenomics and geriatric nutrition. In addition to course work, students must plan, conduct and complete a written report on a research project. The prerequisite for admission to this program is the Registered Dietitian Nutritionist credential.

Concentration Requirements

MATH 522. Statistics for Researchers 3.00

NUTR 654. Current Topics in Food 3.00

NUTR 655. Integrated Nutrition 3.00

NUTR 660. Research Methods in Dietetics 3.00

NUTR 672. Professional Practice Issues in Dietetics 3.00

Choose one of the following options: 6-7 Credit Hours

Directed Research option:

NUTR 681. Directed Research in Dietetics I 2.00

NUTR 682. Directed Research in Dietetics II 2.00

NUTR 695. Research Interpretation in Dietetics 1.00

NUTR 696. Graduate Seminar in Dietetics 1.00

NUTR 696. Graduate Seminar in Dietetics 1.00

Choose 12 hours from the following elective courses:

NUTR 545. Nutrition and Exercise 3.00

NUTR 555. Theories and Practices of Weight Management 3.00

NUTR 650. Nutrition Education and Counseling 3.00

NUTR 671. Nutrition in Disease Development, Progression, and Prevention 3.00

NUTR 673. Advanced Management in Dietetics 3.00

NUTR 675. Nutrigenomics 3.00

Thesis option:

NUTR 700. Thesis Research I 3.00

NUTR 701. Thesis Research II 3.00

NUTR 695. Research Interpretation in Dietetics 1.00

Total: 33-35 Credit Hours

Nutrition and Physical Activity Concentration

Phone: 540-568-8935

Website: <https://healthprof.jmu.edu/npaprogram.html>

Email: akersjd@jmu.edu

Graduate Program Director: Dr. Jeremy Akers

This 33-35 credit hour master's program permits students to major in health sciences with a concentration in nutrition and physical activity. This graduate program has been planned for registered dietitians or persons with an undergraduate degree in dietetics, kinesiology or a related area. This program is designed for the student who has an interest in nutrition and its role in physical activity and wellness.

An undergraduate degree with a major in dietetics, kinesiology or a related field is required. Courses in nutrition, exercise physiology, anatomy and physiology are prerequisites for admission to the program. Students should also check the prerequisites listed in the catalog for each course required. Thirty-three hours are required for the degree program, including a thesis or directed research on a selected topic in nutrition and physical activity. The degree program can be completed in as few as two academic years, with a maximum of six academic years. This program does not lead to the RDN status recognized by the Academy of Nutrition and Dietetics.

Concentration Requirements

KIN 644. Metabolic and Cardiorespiratory Aspects of Exercise 3.00

KIN 645. Muscular, Hormonal, and Environmental Aspects of Exercise 3.00

KIN 650. Exercise Testing, Evaluation and Prescription 3.00

MATH 522. Statistics for Researchers 3.00

NUTR 545. Nutrition and Exercise 3.00

NUTR 555. Theories and Practices of Weight Management 3.00

NUTR 582. Nutrition and Metabolism 3.00

NUTR 652. Nutrition Assessment 3.00

NUTR 660. Research Methods in Dietetics 3.00

NUTR 681. Directed Research in Dietetics I 2.00

NUTR 682. Directed Research in Dietetics II 2.00

NUTR 695. Research Interpretation in Dietetics 1.00

NUTR 696. Graduate Seminar in Dietetics 1.00

Thesis Option:

NUTR 700. Thesis Research I 3.00

NUTR 701. Thesis Research II 3.00

NUTR 695. Research Interpretation in Dietetics 1.00

NUTR 696. Graduate Seminar in Dietetics 1.00

Choose one of the following options: 6-8 Credit Hours

Directed Research Option:

Total: 33-35 Credit Hours

History, M.A.

Academic Unit Head

Dr. Gabrielle Lanier

Phone: (540) 568-6132

Website: <http://www.jmu.edu/history/graduate/index.shtml>

Graduate Program Director

Dr. Philip D. Dillard

Professors

J.C. Arndt, K. Borg, J. Butt, P. D. Dillard, S. Guerrier, M. Gubser, S. Hanifi, K. Hardwick, R. Hyser, G. Lanier, M. Mulrooney, D. Owusu-Ansah, S. Reich, M. Seth

Associate Professors

R. Brannon, L.S. Chappell, J. Davidson, C. Davis, T. Fitzgerald, E. Friss, M. Gayne, H. Gelfand, Y. Hu, L. King, K. McCleary, R. Meixsel, W. Van Norman, A. Sandman, E. Westkaemper, A. Witmer

Assistant Professors

M. Galmarini, J. Herrington, D. Morales

Adjunct Professors

K. Brown, A. Crabb, R. Hill

Admission Criteria

All applicants must first satisfy the general application requirements of The Graduate School. For information, see the information for prospective graduate students on The Graduate School website.

In addition to satisfying all admission requirements set by The Graduate School, applicants to the history program to have an undergraduate degree from an accredited institution with a minimum overall undergraduate GPA of 3.0 and satisfactory scores on the Graduate Record Examination General Test (GRE). The department welcomes applicants from any undergraduate major, although the graduate committee may require students who have majored in other fields to take prerequisite undergraduate courses in history.

To Apply

For information about the application process, for the online application form and for application instructions, see <http://www.applyweb.com/apply/jmug/index.html>. There, applicants will upload the materials required for the application.

Required Materials

The Department of History requires all prospective applicants to submit the following:

- GRE scores
- Official transcripts of all colleges and universities attended
- A brief statement of purpose, 500 words in length, that identifies the applicant's academic or professional background, intended field of concentration and long-range career aspirations
- Three letters of recommendation, at least two of which are from individuals familiar with the applicant's academic work and potential for graduate study
- A formal writing sample of approximately 10 to 20 pages that demonstrates the applicant's analytical abilities and writing skills. Applicants who have been out of school for some time should contact the graduate director for advice on identifying appropriate recommenders and on selecting a suitable writing sample.
- Any additional materials that demonstrate the applicant's preparation and potential for graduate study

Application Deadlines

Complete applications must be received by January 15. Incomplete applications will not be considered; applicants are responsible for assuring that all materials have been received. The graduate committee begins its review of all complete applications after February 1. Applications received after January 15 will be reviewed in accordance with openings available in the program. Students normally matriculate in the fall semester.

Mission

The graduate program in history at James Madison University offers concentrations in world, United States and public history. Students deepen their understanding of the past and its relationship to the present, and they develop advanced skills in scholarly research, critical and creative thinking, and oral and written communication. The program serves the needs of the Commonwealth of Virginia by contributing to the creation of an educated, enlightened and productive citizenry. The academic training students receive prepares them for additional graduate education in history, for teaching at the secondary level and for employment in a range of other settings such as museums, archives, government agencies, libraries, historic preservation organizations, historical sites and private businesses.

Degree Requirements

Minimum departmental requirements for the Master of Arts degree with a major in history are as follows:

- Thirty graduate credit hours in history (HIST 653, HIST 671 and HIST 673 required)
- All students in the U.S. concentration must take at least one offering of HIST 600 and one offering of HIST 605. Students in the U.S. concentration must take at least 21 credits at the 600 level or above.
- All students in the U.S. concentration and in the local/regional/public concentration must take, in addition to HIST 653 or its equivalent, three credit hours of course work outside the field of their concentration.
- All students in the world concentration must take at least six credit hours of course work in the region(s) of their thesis and must take six credit hours of course work in regions other than the region of their thesis.
- Completion of a thesis for six credit hours
- Successful completion of a comprehensive examination in one of the three fields of concentration:
 - World history
 - United States history
 - Local/regional/public history

Program Guide

All Master of Arts students are required to complete the following courses.

First Year, Fall Semester

HIST 653. Patterns of World History 3.00 (or its equivalent)

HIST 671. Seminar in Historical Research Methods 3.00

First Year, Spring Semester

HIST 673. Graduate Research and Writing Seminar 3.00

Second Year, Fall Semester

HIST 700. Thesis Research 3.00

Second Year, Spring Semester

HIST 700. Thesis Research 3.00

Integrated Science and Technology, M.S.

Academic Unit Head

Dr. Jeffrey Tang

Phone: (540) 568-2789

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

Graduate Program Director

Dr. Maria Papadakis

Professors

K. Altaii, C. Bachmann, M. Bentley, T. Benzing, T. Chen, S. Frysinger, M. Handley, M. Kimsey, C. Klevickis, R. Kolvoord, H. Kraenzle, D. McGraw, R. McKown, J. Miles, M. Papadakis, R. Raab, E. Salib, A. Teate, W. Teel

Associate Professors

M. Benton, R. Brent, C. Brodrick Hartman, Z. Bortolot, J. Coffman, A. Goodall, N. Radziwill, J. Spindel, J. Tang, T. Walton, P. Wang

Assistant Professor

J. Ferenbaugh

Adjunct Professors

J. Azzopardi, E. Conrad, C. Galdies, S. Lanfranco, M. Scerri, M. Weissenbacher

Admission Criteria

The program seeks a diverse student body with grounding in the natural or social sciences. Qualified applicants may have a background in such fields as engineering, mathematics, economics, environmental studies, natural science, political analysis, operations research, geography, sociology, international relations or selected areas of education, among others. Individuals with experience in industry, government or the non-profit sector are especially valued. Applicants should have demonstrable competence in both natural and social science by having completed a minimum of 15 semester credit hours in the natural sciences and mathematics and an equivalent amount in the social sciences or humanities. Work experience can be substituted for academic experience.

Admission decisions will be holistically based on the following considerations:

- A bachelor's degree or its equivalent awarded by an accredited college or university.
- Undergraduate course work and grade point average.
- Test scores from one of the following: Graduate Record Exam (GRE), Graduate Management Admissions Test (GMAT), Medical College Admission Test (MCAT), Law School Administration Test (LSAT) or Miller Analogy Test (MAT).
- Official transcripts from all colleges or universities attended.
- Industrial, business, government or educational experience as indicated by current resume.
- At least two letters of recommendation.
- A personal statement discussing the applicant's academic and career goals and how the ISAT master's program will help achieve them.

Applications are being accepted for the M.S. ISAT international master's program in environmental management and sustainability, which is taught in Malta. Applicants to this program should follow the instructions detailed on The Graduate School's online application system. The Master of Science program in integrated science and technology is not currently accepting students for its program at the main JMU campus in Virginia.

Mission

The mission of the Department of Integrated Science and Technology's (ISAT) master's program is to provide diverse and experienced professionals with an educational program that facilitates in-depth knowledge and skills by integrating a variety of scientific and technological disciplines and by utilizing a systems approach to analysis and problem solving.

Unique characteristics of the program include:

- Curriculum and teaching methods that are in constant touch with the realities of professional careers related to science and technology.
- Graduates skilled in information technology and knowledge management tools applicable to a broad range of professional careers.
- A curriculum and graduates that are flexible, versatile and able to stay current with critical technologies and compelling social problems related to science and technology.
- Interdisciplinary and integrated applied problem solving that uses systems perspectives to analyze problems and the feasibility of their solutions, including the considerations of non-technological factors such as politics, economics and ethics.

Accreditation

James Madison University is accredited by the Southern Association of Colleges and Schools' Commission on Colleges to award baccalaureate, master's and doctorate degrees. University of Malta is not accredited by the Commission on Colleges and the accreditation of James Madison University does not extend to or include the University of Malta or its students. Although James Madison University accepts certain course work in transfer toward a credential from University of Malta, or collaborates in other ways for generation of course credits or program credentials, other colleges and universities may or may not accept this work in transfer, even if it appears on a transcript from James Madison University. This decision is made by the institution subsequently considering the possibility of accepting such credits.

Continuation and Graduation Requirements

Prospective students should familiarize themselves with the ISAT program and the ISAT master's curriculum. Graduation requires successful completion of core and elective program course work in a sequence approved by the student's graduate adviser. To graduate, students must have a GPA of 3.0 or higher and may not have received a "C" grade in more than any two graduate courses; at least half of the credit hours in the student's program of study must be at the 600-level or higher. A student will be dismissed from the program if the student receives an "F" or "U" in any graduate course or a total of three "C" grades in his/her graduate program. Time limitations for completion of the program, continuous registration requirements and thesis preparation guidelines must follow the regulations of The Graduate School.

Master of Science in Integrated Science and Technology

The Master of Science in integrated science and technology (ISAT) offers programs in Europe and at the JMU campus in Harrisonburg, Virginia. This M.S. in ISAT with a concentration in environmental management and sustainability is taught in Malta in collaboration with the University of Malta as a dual degree program; students who successfully complete the program of study are awarded a Master of Science degree from both universities.

The M.S. in ISAT requires a minimum of 30 hours of graduate course work; the concentration in environmental management and sustainability requires an additional 12 credit hours of graduate classes for a total of 42 credit hours.

The thematic core curriculum provides a solid foundation for the M.S. in ISAT. Students acquire quantitative tools for applied problem-solving as well as for the management of technological issues encountered in contemporary professional practice. The core stresses quantitative and qualitative data analysis, modeling and simulation, and the management of information and technology. It also stresses dynamic systems analysis as a key to problem solving and incorporates non-technical dimensions of science and technology including

social, political, economic and ethical considerations. Students focus on selected areas of science and technology with practical, in-depth exposure to the size and complexity of contemporary problems.

Depth is provided through elective course work and thesis or capstone project study. Thematic areas of science and technology around which students may build a program of study are distilled from national critical technologies and include the environment, energy, biotechnology, information technology and manufacturing.

Students are required to complete a six-credit hour capstone project or thesis as a core requirement. The project/thesis can be theoretical or practical, and it can involve research, social analysis, evaluation of potential solutions and/or design implementation. The effort requires students to demonstrate their mastery of an integrated approach to scientific and technological issues.

Core Curriculum

Foundational Concepts of Integrated Science and Technology

ISAT 502. Earth Systems and the Sustainability of Natural Resources *2.00 2 credit hours*

ISAT 510. Foundations in Integrated Science and Technology *2.00 2 credit hours*

ISAT 620. Introduction to System Dynamics *4.00 4 credit hours*

Science, Technology and Society: 3 Credit Hours

ISAT 610. Social Context of Science and Technology *3.00*

ISAT 612. Sustainability, Society and Change *3.00*

Analytical Methods and Techniques: 3 Credit Hours

ISAT 630. Computer Modeling and Simulation *3.00*

ISAT 632. Analytical Methods and Techniques *1.00 - 3.00*

Information and Technology Management: 3 Credit Hours

ISAT 640. Information and Technology Management *3.00*

ISAT 642. Applications of GIS for Resource Management *3.00*

Capstone Project or Thesis: 6 Credit Hours

Capstone Option (all courses below are required)

ISAT 504. Project Management in A Cross-Cultural Environment *1.00*

ISAT 564. Integrated Case Study Seminar *1.00*

ISAT 690. Capstone Project *4.00 - 6.00*

Thesis Option:

ISAT 700. Thesis Research *6.00*

Total: 21 Credit Hours

M.S. in Integrated Science and Technology (Harrisonburg)

The M.S. in ISAT taught at the main JMU campus is a 30-credit hour Master of Science curriculum that consists of 21 credit hours of required core courses followed by nine credit hours of elective course work tailored to the student's needs and goals. The core curriculum reinforces the student's foundation in science, explores methods of research and analysis in a multidisciplinary environment, and imparts sensitivity to the social context of applying science and technology. The nine graduate elective credits must be approved by the student's adviser.

Requirements

Core curriculum *21 Credit Hours*

Approved electives *9 Credit Hours*

Total: 30 Credit Hours

Integrated Science and Technology, M.S., Sustainable Environmental Resources Management Concentration

A version of the ISAT master's degree is offered as a dual degree, international master's program jointly with the University of Malta and is supported by JMU's Center for Global Engagement. This 42-credit hour program offers a specialized course of study in environmental management and sustainability and is taught entirely in Malta as an accelerated 12-month degree program. Both JMU and University of Malta faculty contribute equally to instruction and project or thesis supervision. Students who successfully complete the degree requirements are awarded a Master of Science degree from each university.

The M.S. in ISAT with a concentration in environmental management and sustainability is designed to build holistic thinking and problem solving using systems perspectives on environmental and sustainability challenges. The curriculum explores principles of sustainability science from Earth systems, natural resource and societal perspectives. It also builds a suite of analytical methods and competencies including GIS, cross-cultural project management, field techniques and statistics. Elective course work builds depth through specialized classes in additional analytical methods, policy analysis, and resource conservation and management. Students broadly focus on either natural resource conservation (such as biodiversity, water resources or agricultural resources) or on sustainable technology management (such as energy conservation or industrial processes). Electives are selected in consultation with, and approved by, the student's graduate adviser to help students build a coherent and meaningful program of study.

Students complete a four credit hour capstone project; exceptional students may opt to complete a master's research thesis, which requires approval from the program's Board of Studies. Students completing the thesis option should expect that their program of study will be 16 months instead of 12. Details on the curriculum structure, required course work, available electives and a program calendar may be found on the program website.

Concentration Requirements

Core curriculum *21 Credit Hours*

ISAT 568. Freshwater Resources Management *4.00*

ISAT 614. Sustainability Policy and Law *3.00*

ISAT 656. Mediterranean Field Study *3.00*

Total: 42 Credit Hours

Kinesiology, Fifth-Year Format, M.A.T.

Department Head

Dr. Janet K. Wigglesworth

Phone: (540) 568-6145

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

Graduate Program Director

Dr. Nicholas D. Luden

Professors

S. Nye, M. Saunders, J. Williams, C. Womack

Associate Professors

E. Edwards, T. Hargens, N. Luden, T. Moran

Assistant Professors

C. McKay, G. Young

Admission

In addition to The Graduate School qualifications for admissions, potential candidates must meet the requirements of the Department of Kinesiology. Contact the department for more information.

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, exercise and sport.

Goals

Program goals are to help students:

- Identify and describe important issues relevant to physical activity, and exercise and sport science.
- Educate others about the relevance of physical activity, exercise and sport to individuals and to society.
- Develop and administrate safe, effective and scientifically based physical activity, exercise and sport programs that address individual, community and societal needs.
- Enable students to evaluate the quality of information germane to the disciplines of physical activity, and exercise and sport science.
- Develop the skills needed to conduct quality research.
- Conceive a cognate area of study within the professional field in which they intend to work.

The Department of Kinesiology offers a Master of Science degree with a focus on exercise physiology that includes both a thesis and non-thesis track. The department also offers a five-year program leading to a Master of Arts in Teaching (M.A.T.) designed for initial licensure to teach physical and health education.

In all programs, courses must be selected with the approval of the adviser in accordance with the professional goals of the student. Students applying to kinesiology are expected to have satisfactory Graduate Record Examination scores and adequate undergraduate preparation including at least one course in a cognate area of the discipline.

Some undergraduate courses may be taken concurrently with graduate work.

The Master of Arts in Teaching leads to an initial Virginia licensure to teach physical and health education PK-12, as a continuation of the undergraduate physical and health education teacher education (PHETE) program. This program is only open to JMU graduates who have a Bachelor of Science degree in kinesiology with a concentration in PHETE. A listing of the undergraduate courses may be found in the current JMU Undergraduate Catalog.

To be fully admitted to the fifth-year M.A.T. program, student must have completed the following requirements:

- Satisfy all requirements for admission to the teacher education program.
- Satisfy all requirements for admission to The Graduate School.

Successful completion of alternative criteria to the GRE, including:

- Possess a GPA of 3.0 or better in the last four semesters of undergraduate course work.
- Display certain personal qualities and dispositions of a professional educator as determined by program faculty.
- Demonstrate appropriate professional development reflective of a quality teacher candidate as assessed by program faculty.
- Demonstrate competence in classroom management and a satisfactory level of teaching ability through video analysis and practicum experience.
- Demonstrate quality planning, effective teaching skills and a demonstration of student learning through a reflective teaching project.

Minimum Requirements

KIN 511. Technology in Health and Physical Education *3.00*

KIN 512. Instructional Methods in Middle and Secondary Physical Education *3.00*

KIN 513. Professional Issues for Prospective Physical and Health Educators *3.00*

KIN 514. Methods in School Health for PHETE *3.00*

KIN 516. Qualitative Analysis of Movement *3.00*

KIN 610. Curriculum Design in Health and Physical Education *3.00*

KIN 611. Teaching Diverse Populations in Health and Physical Education *3.00*

KIN 612. Analysis of Teaching and Learning *3.00*

KIN 683. Secondary Internship in Health & Physical Education *6.00*

Choose one of the following: 3 Credit Hours

KIN 655. Research Techniques *3.00*

EDUC 630. Inquiry in Education *3.00*

Total: 33 Credit Hours

Kinesiology, M.A.T.

The Master of Arts in Teaching leads to an initial Virginia licensure to teach physical and health education PK-12, as a continuation of the undergraduate physical and health education teacher education (PHETE) program. This program is only open to JMU graduates who have a Bachelor of Science degree in kinesiology with a concentration in PHETE. A listing of the undergraduate courses may be found in the current JMU Undergraduate Catalog.

To be fully admitted to the fifth-year M.A.T. program, students must have completed the following requirements:

- Satisfy all requirements for admission to the teacher education program.
- Satisfy all requirements for admission to The Graduate School.

Successful completion of alternative criteria to the GRE, including:

- Possess a GPA of 3.0 or better in the last four semesters of undergraduate course work.
- Display certain personal qualities and dispositions of a professional educator as determined by program faculty.
- Demonstrate appropriate professional development reflective of a quality teacher candidate as assessed by program faculty.

- Demonstrate competence in classroom management and a satisfactory level of teaching ability through video analysis and practicum experience.
- Demonstrate quality planning, effective teaching skills and a demonstration of student learning through a reflective teaching project.

Fifth-Year M.A.T. Program Requirements

KIN 511. Technology in Health and Physical Education 3.00

KIN 512. Instructional Methods in Middle and Secondary Physical Education 3.00

KIN 513. Professional Issues for Prospective Physical and Health Educators 3.00

KIN 514. Methods in School Health for PHETE 3.00

KIN 610. Curriculum Design in Health and Physical Education 3.00

KIN 611. Teaching Diverse Populations in Health and Physical Education 3.00

KIN 612. Analysis of Teaching and Learning 3.00

KIN 683. Secondary Internship in Health & Physical Education 6.00

Choose one of the following:

KIN 655. Research Techniques 3.00 or EDUC 630. Inquiry in Education 3.00

Approved elective: 3 credit hours

Total: 33 Credit Hours

Kinesiology, M.S.

Master of Science in Kinesiology

This 33- to 36-credit hour program leads to a Master of Science degree with a concentration in exercise physiology. Students in this program receive broad-based preparation in exercise physiology including required course work in advanced exercise physiology topics, physiological testing, exercise prescription and research. Students may select either the thesis or non-thesis track and will have elective options in the areas of clinical exercise physiology, applied exercise physiology, nutrition, biology and graduate psychology. This program is designed to prepare students to pursue a doctoral degree in a related field or to enter a variety of workplaces related to clinical, sport, research, fitness or health and wellness industries.

Students must complete core requirements and choose either the thesis track or non-thesis track. The thesis track requires 33 credits for graduation. The non-thesis track requires 36 credits for graduation.

The following 18 credits of core curriculum are required for all students:

Core Requirements

KIN 541. Physical Activity Epidemiology 3.00

KIN 542. Exercise Across the Lifespan 3.00

KIN 644. Metabolic and Cardiorespiratory Aspects of Exercise 3.00

KIN 645. Muscular, Hormonal, and Environmental Aspects of Exercise 3.00

KIN 650. Exercise Testing, Evaluation and Prescription 3.00

KIN 655. Research Techniques 3.00

Choose one of the following tracks:

Thesis Track: 15 Credit Hours

MATH 522. Statistics for Researchers 3.00

KIN 700. Thesis Research 3.00 - 6.00

Electives in consultation with adviser 6 Credit Hours

Non-Thesis Track: 18 Credit Hours

KIN 681. Internship in Exercise Science 3.00 - 9.00 (Credits exceeding 3 can be used as elective credits)

KIN 697. Directed Research in Kinesiology 3.00

Electives in consultation with adviser 12 Credit Hours

Total: 18 Credit Hours

Students may also work with their advisors to seek approval of elective courses outside the department in areas related to their degree program such as biology, nutrition and graduate psychology. Course availability is contingent upon permission of instructor.

KIN 540. Clinical Exercise Physiology I 3.00

NUTR 545. Nutrition and Exercise 3.00

KIN 547. Physiology of Endurance Performance 3.00

NUTR 555. Theories and Practices of Weight Management 3.00

NUTR 582. Nutrition and Metabolism 3.00

KIN 640. Clinical Exercise Physiology II 3.00

KIN 643. Environmental Exercise Physiology 3.00

Mathematics, M.Ed.

Admission Criteria

Prerequisites

Students should have completed undergraduate mathematics (15 credits or more) including linear algebra and a calculus sequence. An undergraduate major in mathematics is desirable, but not necessary.

To Apply

Prospective students should visit The Graduate School website, where they will find links with information about the application process, as well as an online application. For questions about program entrance requirements, contact the mathematics graduate program director.

Mission

The Master of Education (M. Ed.) in mathematics prepares high school teachers for positions of instructional leadership as master teachers of mathematics. The program extends the professional competence of high school mathematics teachers through an in-depth study of mathematics and mathematics teaching and learning. Program participants will demonstrate their knowledge through an innovative, completely online curriculum.

The M. Ed. in mathematics is a collaborative effort of the College of Education and the Department of Mathematics and Statistics that is designed to provide opportunities for mathematics teachers to deepen their understanding of mathematics by learning advanced mathematical topics in relation to the mathematics they actually teach. The program will also help prepare teachers to teach advanced secondary mathematics courses, such as Advanced Placement calculus or statistics. The education courses will provide opportunities for teachers to better understand technologies for learning and how to continue to develop as a professional educator. The M. Ed. is designed to develop teachers' understanding of and ability to apply education research within their own practice. The M. Ed. content is consistent with the recommendations of the Mathematical Education of Teachers' report of the Conference Board of the Mathematical Sciences.

Master of Education in Mathematics

The Master of Education in mathematics includes a minimum of 34 credit hours of course work, which are organized with 13 hours of educational development and 21 hours of mathematics.

All course work for this program is offered online.

Degree Requirements

Course Requirements

EDUC 630. Inquiry in Education 3.00

EDUC 631. Seminar in Educational Inquiry 1.00

EDUC 641. Learning Theories and Practice 3.00

EDUC 642. Curriculum Theory and Issues 3.00

LTLE 570. Design and Development of Digital Media 3.00

MATH 510. Modern Analysis 3.00

MATH 512. Discrete Mathematics 3.00

MATH 514. Modern Algebra 3.00

MATH 520. Modern Geometry 3.00

MATH 615. History of Mathematics 3.00

MATH 617. Probability and Statistics I 3.00

MATH 618. Probability and Statistics II 3.00

Total: 34 Credit Hours

Music, Master's of Music, M.M.

Director

Dr. Jeffrey Bush

Phone: (540) 568-6719

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

Graduate Program Director and Associate Director of the School of Music

Dr. William Dabback

Professors

S. Barber, S. Bolstad, P. Brady, J. Bush, B. Chandler, B. Cockburn, A. Connell, W. Dabback, G. Dobner, C. Donakowski, C. Dotas, J. Gibson, J. Haney, W. Huang, A. Lankford, D. Maddison, D. Pope, E. Ruple, M.J. Speare, K. Stees, C. Stevens

Associate Professors

P. Aponte, C. Carrillo, V. Curry, W. Hayes, L. Maynard, K. McMillan, L. Piitz, D. Rierson, P. Steinberg-Grikis, D. Stringham, J. van der Vat-Chromy

Assistant Professor

C. Cangelosi, E. Guinivan, J. Peterson, J. Zyko

Instructors

D. Cottrell

Adjunct Professors

E. Harris, B. Hickox, B. Kirby, D. Newman, M. Overman, S. Voigt

Mission Statement

The School of Music mentors students in a community that supports and promotes music and musicians. 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 Schools of Music.

Admission Criteria and Degree Requirements

A student entering a graduate degree program in music is expected to have completed an undergraduate degree with a major in music or its equivalent and have a grade point average of 3.0 or better in music studies.

In addition to The Graduate School requirements, the School of Music administers its own diagnostic examinations in written theory, ear training and music literature prior to the student's first semester. The school also requires successful completion of any deficiencies by the time 18 credit hours of study have been completed.

In addition to these general requirements, conducting majors must pass examinations in conducting, and those in choral conducting must pass tests in sight singing, keyboard skills and language diction. The faculty/student ratio also allows for a close relationship and provides the opportunity for individualized instruction in many areas.

The School of Music offers a Master of Music degree with concentration options in conducting, music education, performance and composition. The program seeks to provide an opportunity for the highest level of musical development and professional training for each student, appropriate for careers in teaching, performance and composition of music. Conducting majors will undertake a comprehensive study of the literature of their medium, develop advanced insights into the musical ideas and structure of the major works, and refine their conducting and rehearsal skills.

Performance majors will specialize in activities that develop the technical mastery and musical maturity essential to the art of making music involving their chosen instrument or voice. Student composers will immerse themselves in the techniques and aesthetics of musical creation and will become aware, through intensive examination, of the music and musical thought of all style periods, especially that of the present and immediate past. Music education students will examine the foundations and principles underlying the practices of their profession and will develop both scholarly and technical abilities essential to a continuing development as effective teachers and leaders.

All concentrations in the Master of Music degree program must complete a minimum requirement of 32 hours of graduate credit (30 hours in the music education concentration). In addition to opportunities to broaden and improve skills through music electives, music education majors have the option to pursue courses selected from programs in elementary, secondary or higher education. Graduate students who major in non-music programs may elect the graduate music minor, earning a minimum of 12 hours of graduate credit in courses approved by the music school's coordinator of graduate studies.

As per JMU graduate school requirements, successful completion of the Master of Music degree includes an oral comprehensive examination to be arranged at a date convenient for the master's candidate, adviser and comprehensive committee.

Students electing to minor in music are expected to have completed an undergraduate minor in music or must demonstrate acceptable competencies or skills appropriate to an undergraduate minor at JMU.

Post-baccalaureate, post-master's and other qualified students may enroll in certain courses on a limited basis. For details concerning requirements and deadlines, contact the director of graduate studies for the School of Music.

Assistantships

Teaching and non-teaching graduate assistantships in music are awarded each year on a competitive basis. Specific assignments in applied music, ensembles, music education, theory and literature, accompanying and administration are based on students' qualifications and the School of Music's needs. In addition to an attractive stipend, all assistantships include tuition scholarship for nine graduate credit hours during each fall and spring semester. For more detailed information, procedures for application and deadlines, contact the director of graduate studies for the School of Music.

Class Fees

There is a once per semester fee for enrollment in MUAP 600 and MUAP 700, applied lessons. See MyMadison for details.

Objectives

Students graduating from the M.M. program (with concentrations in Composition, Conducting, Music Education, and Performance) will be able to:

Composition

- formulate a personal creative style of composition.
- demonstrate the fundamental concepts of form, harmony, counterpoint and orchestration.
- differentiate and apply the techniques and aesthetics of musical creation.
- apply the core principles of effective research as scholars and composers.

Master of Music Curriculum

The courses in each Master of Music degree concentration are to be distributed among courses in the major area, cognate courses in music, approved electives and a significant major project.

Concentration projects are:

Composition – a composition project

All entering students who apply for admission to the Master of Music degree program are required to complete a core curriculum comprised of 10-11 credits which will serve as a basis for designing their programs of study. The core curriculum is composed of the following: MUS 600. Research Methods (three credits); specified literature courses (six credits for conducting students, three for all others – choice to be governed in part by placement examination); a theory course designated for the particular concentration (two-three credits); and MUAP, applied study or ensembles (two credits minimum).

All students are expected to complete the core curriculum at the earliest opportunity, in a sequence approved by their adviser.

Prior to the end of the first semester, or after completion of nine hours of credit in the Master of Music program, students will submit a program of study form to the graduate coordinator upon approval by their adviser.

At least one-third of the required credits in a program must be earned in the area of concentration. At least one-half (15-16 credits) of the required total credits must include courses from the 600 level and above. No more than six credits in workshops (501) may be used to meet minimum requirements for the degree.

Concentration Requirements

MUS 600. Research Methods 3.00

MUS 701. Analytical Techniques I 3.00

MUS 702. Advanced Seminar in Music Theory 3.00

MUS 551. Music Composition 2.00 - 3.00 or MUS 552. Music Composition 2.00 - 3.00 or MUS 651. Music Composition 2.00 - 3.00 or MUS 652. Music Composition 2.00 - 3.00

MUS 750. Graduate Musicology or Ethnomusicology Seminar 3.00 or MUS 697. Composition Final Project and Recital 2.00

MUAP 697. Graduate Composition Recital 1.00

Electives in music literature, music history, performance, pedagogy, theory and additional composition 9 Credit Hours

Total: 32 Credit Hours

Music, Composition, M.M.

Concentration Requirements

MUS 600. Research Methods 3.00

MUS 701. Analytical Techniques I 3.00

MUS 750. Graduate Musicology or Ethnomusicology Seminar 3.00 or MUAP 600. Applied Music Lesson 1.00 - 3.00 (three credits each term)

A minimum of six credits are to be earned in the appropriate track (choral, orchestral or wind)

MUAP 696. Graduate Lecture Recital 2.00

Approved electives, 500-700 level 9 Credit Hours

Choral Track

Admission to the choral conducting concentration requires, in addition to the School of Music requirements in ear training, written theory and music history, successful completion of entrance examinations in conducting, keyboard skills, sight-singing, and French, Latin, German and Italian diction. Undergraduate or graduate credit in a course in vocal pedagogy must be presented for graduation.

MUS 556. Choral Literature I 3.00

MUS 557. Choral Literature II 3.00

Wind Track

Admission to the instrumental concentration requires, in addition to the School of music requirements in ear training, written theory and music history, successful completion of entrance examinations in conducting, keyboard skills and orchestration.

MUS 548. History and Literature of Wind Performance 3.00

Orchestral Track

Lab in ensemble will be required each semester of enrollment in applied conducting.

MUS 707B. Score and Literature Survey for Orchestral Conductors I 3.00

MUS 708B. Score and Literature Survey for Orchestral Conductors II 3.00

A minimum of six credits are to be earned in the appropriate track (choral, orchestral or wind):

MUAP 600. Applied Music Lesson 1.00 - 3.00 (Choral Conducting)

MUAP 600. Applied Music Lesson (Orchestral Conducting)

MUAP 600. Applied Music Lesson (Wind Conducting)

Total: 32 Credit Hours

Music, Music Education, M.M.

The courses in each Master of Music degree concentration are to be distributed among courses in the major area, cognate courses in music, approved electives and a significant major project.

Concentration projects are:

Music education – a thesis, document or research project in MUED 691

All entering students who apply for admission to the Master of Music degree program are required to complete a core curriculum comprised of 10-11 credits which will serve as a basis for designing their programs of study. The core curriculum is composed of the following: MUS 600. Research Methods (three credits); specified literature courses (six credits for conducting students, three for all others – choice to be governed in part by placement examination); a theory course designated for the particular concentration (two-three credits); and MUAP, applied study or ensembles (two credits minimum).

All students are expected to complete the core curriculum at the earliest opportunity, in a sequence approved by their adviser.

Prior to the end of the first semester, or after completion of nine hours of credit in the Master of Music program, students will submit a program of study form to the graduate coordinator upon approval by their adviser.

At least one-third of the required credits in a program must be earned in the area of concentration. At least one-half (15-16 credits) of the required total credits must include courses from the 600 level and above. No more than six credits in workshops (501) may be used to meet minimum requirements for the degree.

Concentration Requirements

MUS 548. History and Literature of Wind Performance *3.00* or MUS 556. Choral Literature I *3.00* or MUS 557. Choral Literature II *3.00* or MUS 750. Graduate Musicology or Ethnomusicology Seminar *3.00* or MUS 600. Research Methods *3.00*
 MUED 670. Principles and Practices in Music Education *3.00*
 MUED 671. Methodological Approaches to Research in Music Education *2.00*
 Music courses (MUS) Theory, Arranging, Counterpoint, Analytical Studies in Music Literature or Music Theory Practices *2-3 Credit Hours*

Applied music study (MUAP) (must include two credits of applied lessons, may include two credits of ensembles) *4 Credit Hours*

Approved electives *6-7 Credit Hours*^{1,2}

Choose one of the following: 6 Credit Hours

MUED 680. Capstone Prospectus Development in Music Education *2.00* and Music education elective courses (3 credits)¹

MUED 700. Capstone Project in Music Education *3.00*

Total: 30 Credit Hours

Footnotes

¹ MUED 660 and MUED 661 are strongly recommended as electives for students pursuing the degree during the summer. ² A student may choose an option in elementary, secondary or higher education (eight credits) or may select approved courses in music, music education or applied music, and/or courses from the respective education minors.

Music, Performance, M.M.

Master of Music Curriculum

The courses in each Master of Music degree concentration are to be distributed among courses in the major area, cognate courses in music, approved electives and a significant major project.

Concentration projects are:

Performance – a recital or lecture recital

All entering students who apply for admission to the Master of Music degree program are required to complete a core curriculum comprised of 10-11 credits which will serve as a basis for designing their programs of study. The core curriculum is composed of the following: MUS 600. Research Methods (three credits); specified literature courses (six credits for conducting students, three for all others – choice to be governed in part by placement examination); a theory course designated for the particular concentration (two-three credits); and MUAP, applied study or ensembles (two credits minimum).

All students are expected to complete the core curriculum at the earliest opportunity, in a sequence approved by their adviser.

Prior to the end of the first semester, or after completion of nine hours of credit in the Master of Music program, students will submit a program of study form to the graduate coordinator upon approval by their adviser.

At least one-third of the required credits in a program must be earned in the area of concentration. At least one-half (15-16 credits) of the required total credits must include courses from the 600 level and above. No more than six credits in workshops (501) may be used to meet minimum requirements for the degree.

Concentration Requirements

Voice majors must exhibit competence in French, German and Italian diction. Eight credits each of two languages (equivalent to the 101-102 level at JMU) are expected. Voice majors are also required to have completed at least one course in vocal pedagogy for graduation; courses taken at the undergraduate level may meet this requirement.

MUS 600. Research Methods *3.00*

MUS 701. Analytical Techniques I *3.00*

MUS 750. Graduate Musicology or Ethnomusicology Seminar *3.00*

MUAP 500 level. Ensembles *2-4 Credit Hours*²

MUAP 600 level. Applied major *6-9 Credit Hours*²

MUAP 695. Graduate Recital *1.00*²

Music electives in theory, literature and pedagogy *6 Credit Hours*

Approved electives, 500-700 level *3-6 Credit Hours*

Total: 32 Credit Hours

Footnote

¹ Minimum of 11 credits in the applied major, ensemble and recital credits.

Music, Performance, Optional Singing Health Emphasis, M.M.

(in addition to the Performance Requirements for Vocal)

Undergraduate Prerequisites

This emphasis requires three undergraduate courses as prerequisites.

CSD 208. Anatomy and Physiology of the Ear and Voice Mechanism *3 Credit Hours*

CSD 209. Acoustics of Hearing and Speech *3 Credit Hours*

KIN 202. Biological Foundations of Kinesiology *3 Credit Hours*

Comprehensive Final Examination

Each student in the Singing Health Emphasis must successfully pass a written and oral practical examination administered by the Singing Health Specialist Coordinating Committee.

This final examination is in addition to the comprehensive examination for the M.M. in Vocal Performance.

Minimum Requirements

CSD 656. Voice Disorders *2.00*

PSYC 601. Special Topics in Psychology *1.00 - 3.00*

MUPED 777. Vocal Pedagogy I *3.00*

MUPED 778. Vocal Pedagogy II *3.00*

CSD 582. Speech Practicum B *2.00* (clinical observation at the JMU/Rockingham Community Hospital Collaborative Voice and Swallowing Clinic)

Electives (choose two of the following): 6 Credit Hours

CSD 604. Neuroanatomy and Neurophysiology of Speech & Language *3.00*

CSD 605. Physiological and Acoustical Phonetics *3.00*

PSYC 614. Advanced Developmental Psychology *3.00*

Total: 22 Credit Hours

Nursing, Master of Science in Nursing, M.S.N.

Interim School Director

Dr. Melody Eaton

Phone: (540) 568-6314

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

Interim Associate Director of Graduate Programs

Dr. Andrea Knopp

D.N.P. Program Coordinator

Dr. Jeannie Garber

Interim Nurse Practitioner Program Coordinator

Dr. Amy Graham

Leadership (CNL/NA) Programs Coordinator

Dr. Christine Argenbright

Professors

M. deValpine, M. Eaton, J. Garber, L. Hulton

Associate Professors

S. Annan, C. Argenbright, A. Knopp, E. Lewis, E. Sawin, J. Strunk

Assistant Professors

L. Donovan, D. Elkins, A. Graham

Instructor

S. Stowell Condra (Lead Faculty, AGPCNP)

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

Accreditation

The master of science in nursing and the doctor of nursing practice programs are accredited by the Commission on Collegiate Nursing Education, <http://www.ccnaccreditation.org/>.

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

Accreditation

The master of science in nursing and the doctor of nursing practice programs are accredited by the Commission on Collegiate Nursing Education, <http://www.ccnaccreditation.org/>.

Nursing, Adult/Gerontology Primary Care Nurse Practitioner (AGPCNP), M.S.N.

The James Madison University School of Nursing offers a Master of Science in Nursing degree with concentrations offered as:

- Adult/Gerontology Primary Care Nurse Practitioner (AGPCNP)
- Clinical Nurse Leader (CNL)
- Family Nurse Practitioner (FNP)
- Nurse Administrator (NA)
- Nurse Midwifery (NMW) (in conjunction with Shenandoah University)
- Psychiatric Mental Health Nurse Practitioner (PMHNP) (in conjunction with Shenandoah University)

All concentrations are designed to meet the Essentials of Masters Education in Nursing (AACN, 2011). Students are admitted for full-time or part-time study. Full-time students can complete the program in four full-time academic semesters. The FNP (or Family/Across the Lifespan) concentration requires 49 credits. The FNP concentration meets the competencies outlined by the National Organization of the Nurse Practitioner Faculties (NONPF) and the American Association of Colleges of Nursing (AACN). Students complete 650 contact practicum hours. The AGPCNP concentration requires 46 credits. The AGPCNP concentration meets the competencies outlined by the National Organization of Nurse Practitioners (NONPF) and the American Association of Colleges of Nursing (AACN). Students complete 650 contact practicum hours. Graduates of the nurse practitioner

concentrations are eligible to take the appropriate certification examination through the American Academy of Nurse Practitioners (AANP), or the American Nurses Credentialing Center (ANCC).

The leadership options are Clinical Nurse Leader (CNL), which requires 38 credit hours or Nurse Administrator (NA), which requires 32 credit hours of study for applicants who have a BSN. A transcript analysis will be completed on all students who have an associate degree in nursing (ADN) from an accredited nursing program and an undergraduate baccalaureate degree in another field to determine any gaps in meeting the Essentials of a Bachelor of Science in Nursing. During this transcript review, the plan of study may include up to 11 extra credits. Graduates of the CNL concentration are prepared to provide leadership in providing direct clinical care. The NA concentration prepares graduates to assume management positions within health care organizations. Students are admitted for full-time or part-time study. The CNL option is designed to meet the competencies established by the American Association of Colleges of Nursing (AACN); and the Nurse Administrator is designed to meet the competencies established by the American Organization of Nurse Executives (AONE). Students complete 400 hours of practicum experience. Graduates of the CNL program are eligible to take the CNL certification examination offered by the Commission on Nurse Certification.

The Nurse Midwifery concentration is offered in conjunction with Shenandoah University. Students complete the first year of study (22 credits) at James Madison University, and the second year of study at Shenandoah University (19 credits). The JMU credits may be taken part-time or full-time. The second year of nurse midwifery courses is taken in full-time study at Shenandoah University. Student will graduate with a degree from James Madison University and a Post Graduate Certificate in Nurse Midwifery from Shenandoah University. The Psychiatric Mental Health concentration is offered in conjunction with Shenandoah University. Students complete the first year of study (22 credits) at James Madison University, and the second year of study at Shenandoah University (29 credits). The JMU credits may be taken part-time or full-time. The second year of psychiatric mental health courses is taken in full-time study at Shenandoah University. Student will graduate with a degree from James Madison University and a Post Graduate Certificate in Psychiatric Mental Health from Shenandoah University.

Admission

To be considered for admission to the M.S.N. program prospective students must:

- Hold a current Registered Nurse license.
- Complete the online application for The Graduate School.
- Be admitted to The Graduate School.
- Hold a Bachelor of Science in Nursing (B.S.N.) or a baccalaureate degree in another field with a cumulative GPA of 2.8 (3.0 NP concentrations/Nurse Midwifery applicants only)
- Provide GRE Scores or Miller Analogy Test (MAT) Scores (GRE Study Guide) (NP concentrations and Midwifery applicants only)
- Have relevant clinical experience.
- Have taken undergraduate courses in statistics and health assessment with a grade of "C" or higher.
- Meet the schools's disability accommodation standards.
- Complete an interview upon request.
- Have health documentation and CPR certification.
- Foreign school graduates: Pass CGFNS Exam, R.N. License, TOEFL (Paper: 570 or higher; Electronic: 88 or higher).

Additional documentation will be required upon admission.

Students applying for the Nurse Midwifery or Psychiatric Mental Health NP program will need to also apply and meet Shenandoah University requirements.

Application Deadline

Applications are processed on a rolling admission basis until the class fills for the CNL and Nurse Administrator tracks. Nurse Practitioner applicants have a March 1 deadline. Full and part-time students will enter the program in the summer or fall semester of each year.

Application Evaluation Criteria

Evaluation criteria includes previous academic and scholarly work, professional experience, MAT or GRE standardized test results (NP concentrations and Midwifery applicants), professional references, and a personal and professional goal statement and its relationship to the mission of the School of Nursing. Professional references will be reviewed, and an interview may be required.

Curriculum

All M.S.N. students complete the graduate core courses.

Graduate Core Courses

NSG 520. Advanced Health Assessment 3.00 ¹

NSG 521. Advanced Concepts in Pathophysiology 3.00 ¹

NSG 522. Advanced Clinical Pharmacotherapeutics 3.00 ¹

NSG 611. Research for the Advanced Health Professional 3.00

NSG 690. Epidemiology and Population Assessment 3.00

NSG 692. Health Policy for Practice and Advocacy 3.00

Total: 21 Credit Hours

Footnote

¹ NA concentration does not require NSG 520, NSG 521, or NSG 522.

Adult/Gerontology Primary Care Nurse Practitioner (AGPCNP) Curriculum

Courses

Nursing Core Courses 21.00

NSG 630. Care Delivery and Coordination I 4.00

NSG 631. Care Delivery and Coordination II 4.00

NSG 632. Coordinated Care of the Elderly 3.00

NSG 634. Advanced Nursing Role Development 1.00

NSG 671. Practicum I 3.00 (150 practicum hours)

NSG 672. Practicum II 5.00 (250 practicum hours)

NSG 673. Practicum III 5.00 (250 practicum hours)

Total: 46 Credit Hours

Nursing, Clinical Nurse Leader (CNL), M.S.N.

Graduate Core Courses

All M.S.N. students complete the graduate core courses.

NSG 520. Advanced Health Assessment 3.00 ¹

NSG 521. Advanced Concepts in Pathophysiology 3.00 ¹

NSG 522. Advanced Clinical Pharmacotherapeutics 3.00 ¹

NSG 611. Research for the Advanced Health Professional 3.00

NSG 690. Epidemiology and Population Assessment 3.00

NSG 692. Health Policy for Practice and Advocacy 3.00

Total: 21 Credit Hours

Footnote

¹ NA concentration does not require NSG 520, NSG 521, or NSG 522.

Clinical Nurse Leader (CNL) Curriculum

Courses

Nursing Core Courses 21.00

NSG 650. Organizational Behavior in Health Care 3.00

NSG 651. Leadership Development 3.00

NSG 653. Educational Methodologies for Nurse Leaders 3.00

NSG 676. Clinical Nurse Leader Practicum I 2.00-4.00 (200 practicum hours)

NSG 677. Clinical Nurse Leader Practicum II 4.00 (200 practicum hours)

Total: 38 Credit Hours

Nursing, Family Nurse Practitioner (FNP), M.S.N.

Graduate Core Courses

All M.S.N. students complete the graduate core courses.

NSG 520. Advanced Health Assessment 3.00 ¹

NSG 521. Advanced Concepts in Pathophysiology 3.00 ¹

NSG 522. Advanced Clinical Pharmacotherapeutics 3.00 ¹

NSG 611. Research for the Advanced Health Professional 3.00

NSG 690. Epidemiology and Population Assessment 3.00

NSG 692. Health Policy for Practice and Advocacy 3.00

Total: 21 Credit Hours

Footnote

¹ NA concentration does not require NSG 520, NSG 521, or NSG 522.

Family Nurse Practitioner (FNP) Curriculum

Courses

Nursing Core Courses 21.00

NSG 630. Care Delivery and Coordination I 4.00

NSG 631. Care Delivery and Coordination II 4.00

NSG 632. Coordinated Care of the Elderly 3.00

NSG 634. Advanced Nursing Role Development 1.00

NSG 635. Family Centered Care Delivery 3.00

NSG 671. Practicum I 3.00 (150 practicum hours)

NSG 672. Practicum II 5.00 (250 practicum hours)

NSG 673. Practicum III 5.00 (250 practicum hours)

Total: 49 Credit Hours

Nursing, Nurse Administrator (NA), M.S.N.

Graduate Core Courses

All M.S.N. students complete the graduate core courses.

NSG 520. Advanced Health Assessment 3.00 ¹

NSG 521. Advanced Concepts in Pathophysiology 3.00 ¹

NSG 522. Advanced Clinical Pharmacotherapeutics 3.00 ¹

NSG 611. Research for the Advanced Health Professional 3.00

NSG 690. Epidemiology and Population Assessment 3.00

NSG 692. Health Policy for Practice and Advocacy 3.00

Total: 21 Credit Hours

Footnote

¹ NA concentration does not require NSG 520, NSG 521, or NSG 522.

Nurse Administrator (NA) Curriculum

Courses

Nursing Core Courses

NSG 650. Organizational Behavior in Health Care 3.00

NSG 651. Leadership Development 3.00

NSG 655. Concepts for Nurse Administrators 3.00

NSG 678. Nursing Administration Practicum I 2.00-4.00 (200 practicum hours)

NSG 679. Nursing Administration Practicum II 4.00 (200 practicum hours)

Graduate Elective 3 Credit Hours

Total: 32 Credit Hours

Nursing, Nurse Midwifery, M.S.N.

Graduate Core Courses

All M.S.N. students complete the graduate core courses.

NSG 520. Advanced Health Assessment 3.00 ¹

NSG 521. Advanced Concepts in Pathophysiology 3.00 ¹

NSG 522. Advanced Clinical Pharmacotherapeutics 3.00 ¹

NSG 611. Research for the Advanced Health Professional 3.00

NSG 690. Epidemiology and Population Assessment 3.00

NSG 692. Health Policy for Practice and Advocacy 3.00

Total: 21 Credit Hours

Footnote

¹ NA concentration does not require NSG 520, NSG 521, or NSG 522.

Courses Taken at JMU

Nursing Core Courses 21 credit hours

NSG 634. Advanced Nursing Role Development 1.00

Total: 22 credit hours

Courses Taken at Shenandoah University

NM 610. Primary Care of Women 2(1) Credit Hours

NM 620. Comprehensive Antepartal Care 2(1) Credit Hours

NM 630. Midwifery Practicum (3) Credit Hours

NM 640. Comprehensive Perinatal Care 2(1) Credit Hours

NM 651. Integrated Midwifery Internship (5) Credit Hours

NM 652. Evidence-Based Practice Project 1 Credit Hours

NM 660. NM Role Development 1 Credit Hours

Refer to Shenandoah University's Graduate Catalog for most recent information on their course listing for the NMW Post Masters Certificate.

Total: 8(11) Credit Hours

Total Credits: 41 Credit Hours

* Based on a 1:4 clinical hour/clock hour ratio. These are minimum number of hours; may be extended due to unknown number of hours needed for each birth. Clinical is interpreted in "# of experiences," i.e. "# of deliveries." The clinical hours should be sufficient to meet the learning needs of students. Because of the nature of midwifery practice, students may require additional hours to successfully meet the Core Competencies for Basic Midwifery Practice as outlined by the ACNM. Students are informed of this unique nature of nurse-midwifery in course syllabi.

Shenandoah University – Nurse-Midwifery (NM) Courses

Students completing the nurse-midwifery courses at Shenandoah University will receive a Post Graduate Certificate in Midwifery and will be eligible to take the national certification examination from the American Midwifery Certification Board to become certified nurse-midwives. Also refer to the Shenandoah University Graduate Catalog for more information on the nurse-midwifery courses.

Descriptions from Shenandoah University's Graduate Catalog. Refer to Shenandoah University's Graduate Catalog for most recent information on their courses.

NM/NMLBD 610. Primary Care of Women. (Taken at Shenandoah University). 3 credits: 2 didactic and 1 clinical.

The intent of this course is to assist the student in developing and applying knowledge, skills, values, meanings and experiences related to the nurse-midwifery management process in the primary care of women. *Prerequisites: Completion of all graduate-level core courses. NMLB 610 clinical must be taken concurrently. Includes a clinical/lab fee.*

NM/NMLBD 620. Comprehensive Antepartal Care. (Taken at Shenandoah University). 3 credits: 2 didactic and 1 clinical.

The intent of this course is to assist the student in developing and applying knowledge, skills, values, meanings and experiences of the nurse-midwifery management process in the comprehensive antepartal care of women. *Prerequisites: Completion of all graduate-level core courses. NMLB 620 clinical must be taken concurrently. Includes a clinical/lab fee.*

NM/NMLB 630. Nurse-Midwifery Practicum. (Taken at Shenandoah University). 3 credits for clinical.

The intent of this course is to assist the student in applying knowledge, skills, values, meanings and experiences of the nurse-midwifery management process in primary care and comprehensive antepartal care. *Pre/corequisites: Completion of NM 610 and NM 620. Includes a clinical/lab fee.*

NM/NMLBD 640. Comprehensive Perinatal Care. (Taken at Shenandoah University). 3 credits: 2 didactic and 1 clinical.*

The intent of this course is to assist the student in developing knowledge, skills, values, meanings and experiences of the nurse-midwifery management process in comprehensive perinatal care. *Pre/corequisite: Completion of NM 630. NMLB 640 clinical must be taken concurrently. Includes a clinical/lab fee.*

NM/NMLB 651. Integrated Nurse-Midwifery Practicum. (Taken at Shenandoah University). 5 credits.*

This final clinical course in the Midwifery Program provides the opportunity for the student to integrate and influence the knowledge, skills, values, and meanings related to the nurse-midwifery management process in primary care, comprehensive antepartal care and comprehensive perinatal care. The number of clinical hours associated with this five credit course will be at least 300 hours but will be dependent upon the number of clinical experiences in full-scope midwifery practice necessary to attain competency as assessed by nurse-midwifery faculty. *Prerequisite: NM 640.*

NM 652. Evidence-Based Practice Project. (Taken at Shenandoah University). 1 credit.

This is the capstone course for the graduate credential in the Nurse-Midwifery Program. It provides the opportunity for students to integrate and influence the knowledge, skills, values, meanings, and experiences related to the documentation and analysis of evidence-based and interprofessional practice in primary care and comprehensive perinatal care. The Evidence-Based Practice Project will utilize perinatal case studies to analyze the relationship between evidence-based practice and the optimality of outcomes. *Prerequisites: NM 640, NMLB 640.*

NM 660. Advanced Nurse-Midwifery Role Development. (Taken at Shenandoah University). 1 credit.

The intent of this course is to assist the student in acquiring and applying the knowledge, skills, values, meanings and experiences of the professional behaviors associated with the practice of advanced/specialized nursing. *Prerequisites: Completion of NM 650.*

Nursing, Psychiatric Mental Health Nurse Practitioner (PMHNP), M.S.N.

Graduate Core Courses

All M.S.N. students complete the graduate core courses.

NSG 520. Advanced Health Assessment 3.00¹

NSG 521. Advanced Concepts in Pathophysiology 3.00¹

NSG 522. Advanced Clinical Pharmacotherapeutics 3.00¹

NSG 611. Research for the Advanced Health Professional 3.00

NSG 690. Epidemiology and Population Assessment 3.00

NSG 692. Health Policy for Practice and Advocacy 3.00

Total: 21 Credit Hours

Footnote

¹ NA concentration does not require NSG 520, NSG 521, or NSG 522.

Courses Taken at JMU

Nursing Core Courses 21 Credit Hours

NSG 634. Advanced Nursing Role Development 1.00

Total: 22 credit hours

Courses Taken at Shenandoah University

Summer 1

NP 525. Behavioral Neuroscience: Independent Study 3 Credit Hours

PMH 635. Foundations of Psychotherapy 3 Credit Hours

Fall 1

PMH 641. Management of Psychiatric Mental Health: Adult (Class) 2 Credit Hours

PMH 641 Management of Psychiatric Mental Health: Adult Practicum (120 clinical hours) 2 Credit Hours

PMH 680. Management of Psychiatric Mental Health: Child & Adolescent (Class) 2 Credit Hours

PMH 680. Management of Psychiatric Mental Health: Child & Adolescent (120 clinical hours) 2 Credit Hours

Spring 1

HP 576. Substance and Relationship Abuse 3 Credit Hours

PMH 660. Management of Complex Mental Health Across the Lifespan (Class) 2 Credit Hours

PMH 660. Management of Complex Mental Health Across the Lifespan Practicum (120 clinical hours) 2 Credit Hours

PMH 685. Management of Psychiatric Mental Health: Geriatric 2 Credit Hours

Summer 2

NP 690. Advanced Nurse Practitioner Role Development 2 Credit Hours

PMH 695. Advanced Psychiatric Mental Health Practicum (240 clinical hours) 4 Credit Hours

Refer to Shenandoah University's Graduate Catalog for most recent information on their course listing and course descriptions for the PMHNP Post Masters Certificate.

Total: 29 Credit Hours

Occupational Therapy, M.O.T.

Graduate Program Director: Dr. Rachelle Dorne

Phone: (540) 568-2399

Website: <http://healthprof.jmu.edu/ot/index.html>

Mission

The mission of the Occupational Therapy program is to provide a well-rounded educational experience to students that will prepare them to effectively practice in a variety of service areas within today's health and human service arena. Each graduate will:

- Possess a thorough understanding of the occupation.
- Be able to articulate and demonstrate the theoretical and practical application of occupational therapy.
- Be comfortable and competent working with individuals in a variety of practice settings.
- Be committed to continuous professional growth and the evolution and validation of the profession as human needs change.
- Be able to systematically locate and evaluate available evidence-based literature to formulate assessment and intervention decisions to guide professional practice.

Faculty participating in the program will contribute through service and education to professional circles and the local community. They will maintain high standards of professional knowledge while offering quality education to students.

Occupational therapists work with individuals whose ability to participate in the occupations of life is disrupted or unable to develop due to injury, disease, developmental difficulties or environmental factors. Occupational therapy is a health and human service profession whose name is reflective of the time that it was formally founded (1917) when the term occupation collectively referred to activities people engage in throughout their day. Based on the centuries-old belief that there is health in doing, active client-centered participation is both the focus of the professional and its main avenue of intervention.

Occupational therapists work in hospitals (inpatient and outpatient programs), rehabilitation centers, early intervention programs, schools, mental health programs, home health care agencies, industrial medicine/rehabilitation programs, skilled nursing facilities, private practices, correctional facilities, shelters, community-based programs, and at colleges or universities as faculty.

About the Program

The Master of Occupational Therapy (M.O.T.) is a face-to-face, full-time program designed to prepare students for professional entry-level practice with clients across the lifespan in current and emerging practice settings. The Occupational Therapy program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, Suite 200, Bethesda, Md 20814- 3449. ACOTE's telephone number, c/o AOTA, is (301) 652-AOTA, and its web address is www.acotonline.org.

One cohort of 24 students is admitted each year. Classes begin in June. The program is 2.5 years long, with 2 years of courses supported with Level I fieldwork, followed by six months of full-time fieldwork. Successful completion of 79 graduate credits and all associated program and university responsibilities will fulfill the requirements to earn the M.O.T. degree.

Admission Requirements

The admission process is very competitive and the program receives more qualified applicants that can be accepted in any given year. Completion of required prerequisite courses and/or meeting the minimum GPA requirements does NOT guarantee admission in the Occupational Therapy program.

For clarification of admissions requirements and application processes, we recommend that applicants attend a scheduled information session. The information session schedule is found on the JMU OT program admissions page.

Check for updates to the Occupational Therapy program website for current information: <http://healthprof.jmu.edu/ot/index.html>

To be considered for admission to the OT program, all prospective students must:

- Earn a bachelor's or higher degree from a regionally accredited university by May 31. Note: Applicants may be enrolled in or plan to complete prerequisite courses at the time of application, however, students may have no more than 3 outstanding prerequisite courses in the spring. All prerequisites must be completed by May 31 of the year of admission.
- Earn a minimum cumulative grade point average of 3.0 or higher.
- Meet all prerequisite course requirements with a grade of "C" (2.0) or higher in the courses noted below. For the anatomy and physiology course(s), the grade earned must be at least a grade of "B" (3.0 on a 4-point scale).
- Complete and submit verification of at least forty (40) observation hours with supervision by an occupational therapist at 2 or more sites.
- Demonstrate proficiency communicating (verbal and written) in English. If the student completed course work internationally, he/she must submit and official copy of the TOEFL or IELTS verification. Please see the International Admissions website for details.
- Demonstrate the ability to perform the essential functions required of occupational therapist that are listed in the program technical standards. Should an applicant have questions prior to applying, he/she should contact the occupational therapy program directly at otprogram@jmu.edu.

The Occupational Therapy program does not require a criminal record background check for admission. However, to assure that students are safe and trustworthy in fieldwork and practice, the program mandates that all admitted students complete an initial Virginia criminal history record check and drug screen no later than **October 1** of the first year in the program. Updates may be required for participation at specific fieldwork settings.

Additionally, students and applicants should be advised that regulatory boards such as the NBCOT or state licensing boards require criminal record background checks as part of the credentialing process. It is highly recommended that applicants with any reported offenses complete an early determination character review through the NBCOT. Please go to www.nbcot.org for additional information.

Application Process

The application process has three separate parts: (1) The JMU Graduate School, (2) Application through OTCAS, and (3) Submission of transcripts and essays.

Application to both The JMU Graduate School and OTCAS must be submitted by **December 1st** to be considered for admission.

Part One: Application and admission to the JMU Graduate School

All applicants must submit an application and fee to and be admitted to the JMU graduate school. For information about this application process, see The Graduate School.

After completing the Graduate School application, **download the document and save it as a PDF file**.

Applicants do NOT need to submit letters of recommendations or transcripts with the Graduate School application.

Part Two: OTCAS

All applicants must also apply to the OT program through the Occupational Therapy Centralized Application Service (OTCAS). For consideration by the OT program, the online application must be verified by OTCAS by January 15.

A complete and verified OTCAS application contains all required information including the uploaded JMU Graduate School application, transcripts, and letters of recommendation, and reference forms. Through OTCAS, submit requests for three references from individuals with whom you have had contact for sustained period of time, such as university professors,

employers/supervisors, health care professionals, and others. These requests will require the email address of the person who will be completing the reference. Recommendation from friends or family members are highly discouraged.

In the "Documents" section in OTCAS, upload:

- The completed JMU Graduate School application PDF file
- A personal statement of 1,500 words or less. Refer to the JMU OT program website for [specific instructions](#).
- A current resume
- JMU observation forms

Part Three: Submission of transcripts & essays

After completing the JMU Graduate School and OTCAS Applications by December 1, submit the following to the OT program at otprogram@jmu.edu by January 7:

- Unofficial transcripts with updated completed fall prerequisite course grades
- Submit unofficial transcripts showing proof of spring enrollment in any outstanding prerequisites
- Video essay (instructions will be on the website)

Applicants should be familiar with the tuition and fees and cost of living associated with attending graduate school. In-state and out-of-state costs differ and are subject to change. For additional information contact the JMU Graduate School and Financial Aid office.

Prerequisite Courses

Applicants must have earned an undergraduate degree by the start of the graduate OT program in June. The following courses must be completed **within 7 years of the program start date** at a regionally accredited college/university level. Completion of high school AP courses does not count toward prerequisites. These prerequisites will be in effect for the 2019-2020 admissions cycle (OT class of 2022).

Recommended Research Methods course that includes qualitative and quantitative designs [JMU equivalent HTH 408]

Applicants may be enrolled in a **maximum of three prerequisite courses** during the spring semester prior to the start of the Occupational Therapy program. The courses must be completed by the end of spring semester.

The transfer guide for all Virginia Community College System Equivalents [VCCS] courses that will transfer into JMU can be found at <http://www.jmu.edu/registrar/transfer/index.shtml>

Prerequisite Courses	JMU Course Equivalents	Required Credits
Human Physiology w/Lab* and Human Anatomy w/Lab* or Human Anatomy and Physiology I & II, with Labs	Including human models: BIO 270 + L - Human Physiology + Lab [4] BIO 290 + L - Human Anatomy + Lab [4]	8
Social Sciences and Humanities (may include sociology, anthropology, and/or philosophy)	Any two of the following: ANTH 195 - Cultural Anthropology PHIL 150 - Ethical Reasoning SOCI 140 - Individual in Society SOCI 110 - Social Issues in a Global Context	6
Biomechanics or Physics (inclusion of a lab is preferred)	Any of the following: HTH 441 - Rehabilitative Biomechanics [3] or KIN 306 + L - Human Biomechanics + Lab [4] or KIN 407 - Rehab Biomechanics [3] or PHYS 140 + L - College Physics + Lab [4]	3 (4 is preferred)
Statistics	Either of the following: HTH 320 - Statistical Methods for Health Science Research MATH 220 - Elementary Statistics	3
Lifespan Development [must cover the lifespan of a human from birth to death. Students may have to take more than one course to complete this prerequisite]	PSYC 160 - Life Span Human Development [3]	3-6
Abnormal Psychology	PSYC 250 - Introduction to Abnormal Psychology	3
Medical Terminology [college credit course]	HTH 210 - Medical Terminology	1-3

*Human Physiology & Anatomy must be completed with a minimum grade of "B" or higher, and applicants must earn a grade of "C" or higher in all other coursework. A grade of C- does not meet this criterion.

For additional information, contact the Occupational Therapy program office at OTProgram@jmu.edu.

Application Evaluation Criteria

Candidates are evaluated by a thorough review of their written application.

Academic preparation (overall GPA, prerequisite GPA).

Personal statement (see program website for further information).

Communication skills.

OT [Observation Verification Form](#). While 40 hours is minimum, many surpass this.

Thoroughness and timeliness of application submission (date and status of application material when received).

Level of commitment and desire to enroll in graduate occupational therapy education at JMU.

Professional behavior during the application process.

If you are offered admission to the OT program you will need to send original transcripts to the JMU Graduate School prior to beginning classes.

Program Policies

In order to protect vulnerable clients, students will be required to demonstrate proof of vaccination or immunity to certain conditions. Many sites require proof of health insurance.

Students will need to complete CPR [American Heart Association] training prior to starting Level I fieldwork and must keep active credentials. Students may be required to obtain malpractice insurance for some sites.

Academic Standards: Satisfactory progress for graduate students enrolled in the occupational therapy program is defined as earning a grade of "B" or 3.0 in all courses. Students who earn a grade of "C" will be referred to the OT program Academic Review Committee. The Graduate School policies also apply.

- Adherence to Professional & Ethical Codes of Conduct: As is the case within any professional program, students admitted into the Occupational Therapy program must agree to abide by and uphold professional and ethical codes of conduct. These include the JMU Honor Code and the NBCOT Code of Conduct.
- Scheduling: The Occupational Therapy program is carefully designed as a full-time curriculum. The curriculum must be taken in the sequence and semester assigned. Exceptions are extremely rare and are made at the discretion of the OT program Academic Review Committee.
- Academic Fieldwork: These are assigned at the discretion of the academic fieldwork coordinator. Students are responsible for additional costs such as transportation and site requirements. Two types of academic fieldwork are completed in the Occupational Therapy Program:

Level I experiences are designed to expose students to different areas of practice. There are three of these embedded within the curriculum.

Level II experiences are full time, twelve week affiliations. These experiences are designed to prepare students to be at entry level within the particular practice area.

Students should be advised that successful completion of the OT program does not equate to becoming credentialed as an occupational therapist. To become credentialed as an Occupational Therapist, students must be eligible to take the NBCOT exam and meet all criteria for obtaining license in their state of jurisdiction.

Accreditation

Effective December 6, 2013, the Occupational Therapy program was granted full accreditation for a period of ten years (2012/13- 2022/23) by the Accreditation Council for Occupational Therapy Education (ACOTE).

Accreditation Council for Occupational Therapy Education
ACOTE c/o AOTA
4720 Montgomery Lane, Suite 200
Bethesda, MD 20824-3449

Phone: (301) 652-2682
Website: <http://www.acoteonline.org>

Occupational therapists must uphold professional codes of conduct. See the AOTA Code of Ethics.

With full ACOTE accreditation, graduates of the program may be eligible to register to take the National Certification Examination for the Occupational Therapist administered by the National Board for Certification in Occupational Therapy (NBCOT). Students should be advised that NBCOT has instituted a formal background check procedure. Go to <https://www.nbcot.org/> for additional information.

Satisfactory performance on this exam allows the graduate to become an Occupational Therapist Registered (OTR). This credential is required to apply for licensure at the state level. Students are advised to check the licensing requirements for OT practice for each state in which you wish to practice. The licensing and regulatory authority in Virginia is the Virginia Board of Medicine-Department of Health Professions.

Prior criminal charges as well as certain issues related to the Code of Conduct and background checks may affect the graduate's ability to sit for the NBCOT exam and/or attain state licensure. Go to NBCOT Professional Conduct for additional information.

National Board for Certification in Occupational Therapy (NBCOT)
One Bank Street, Suite 300
Gaithersburg, MD 20878
Phone: (301) 990-7979
Website: www.nbcot.org

Virginia Board of Medicine
Occupational Therapy Advisory Board
Perimeter Center
9960 Mayland Drive, Suite 300
Henrico, Virginia 23233-1463
Phone: (804) 367-4600
Website: <https://www.dhp.virginia.gov/Default.htm>

Curriculum Overview

All of the following courses are required and must be taken in the sequence specified. Students must be enrolled full-time. Exceptions to this requirement are rare and are only granted by the program coordinator. Students must perform satisfactorily from an academic, professional, and ethical standpoint in a manner that is consistent with JMU Graduate School and Occupational Therapy program policies.

Summer: Year One (6 weeks)

OT 510. Therapeutic Interaction 3.00
OT 530. Human Occupation and the Foundations of the Profession 3.00
OT 540. The Occupational Therapy Process 3.00

Total: 9 Credit Hours

Fall: Year One

OT 520. Occupational Development Through the Lifespan 3.00
BIO 514. Clinical Anatomy for Occupational Therapists 4.00
BIO 540. Functional Neuroscience for Occupational Therapists 3.00
OT 561. Therapeutic Media in Occupational Therapy 2.00

Additional Information

Students enrolled in the program at the undergraduate level would receive a Bachelor of Science degree in health sciences at this time.

Summer: Year Two

OT 538. Administrative Functions for OTs 3.00
Total: 3 Credit Hours

Fall: Year Two

OT 600. Assistive Technology in Occupational Therapy Practice 3.00
OT 610. Occupational Therapy Intervention in Pediatrics 3.00
OT 620. School Based Practice 2.00
OT 630. Evidence Based Practice 3.00
OT 645. Level I Fieldwork Two 1.00
OT 691. Occupational Therapy Tutorial Group II 1.00

Total: 13 Credit Hours

Spring: Year Two

Total: 12 Credit Hours

Spring: Year One

OT 555. Level I Fieldwork One 1.00
OT 560. Sensorimotor Foundations of Occupational Engagement 3.00
OT 580. Occupational Dysfunction - Cause and Impact 3.00
OT 590. Foundations of Research in Occupational Therapy 3.00
OT 585. Psychosocial Perspectives in Occupational Therapy Practice 3.00
OT 591. Occupational Therapy Tutorial I 1.00

Total: 14 Credit Hours

OT 640. Occupational Therapy Intervention Throughout Adulthood 4.00
OT 651. Community and Health Practice in Occupational Therapy 4.00
OT 655. Level I Fieldwork Three 1.00
OT 692. Occupational Therapy Tutorial Group III 1.00

Total: 10 Credit Hours

Summer: Year Two

OT 663. Policy Analysis and Systems of Service Provision 3.00
OT 665. Level II Fieldwork One 6.00 (12 week placement)
Total: 9 Credit Hours

Fall: Year Three

OT 675. Level II Fieldwork Two 6.00 (12 week placement)
OT 680. Independent Study in Occupational Therapy 3.00

Total: 9 Credit Hours

Note: Level II fieldwork must be completed within 24 months of completion of didactic course work.

Additional Information

Students would receive a Master of Occupational Therapy degree at December commencement once they conclude all academic and clinical course work.

Curriculum Overview

Summer: Year One (6 weeks)

OT 510. Therapeutic Interaction 3.00

OT 530. Human Occupation and the Foundations of the Profession 3.00

OT 540. The Occupational Therapy Process 3.00

Total: 9 Credit Hours

Fall: Year One

OT 520. Occupational Development Through the Lifespan 3.00

BIO 514. Clinical Anatomy for Occupational Therapists 4.00

BIO 540. Functional Neuroscience for Occupational Therapists 3.00

Additional Information

Students enrolled in the program at the undergraduate level would receive a Bachelor of Science degree in health sciences at this time.

Summer: Year Two

OT 538. Administrative Functions for OTs 3.00

Total: 3 Credit Hours

Fall: Year Two

OT 600. Assistive Technology in Occupational Therapy Practice 3.00

OT 610. Occupational Therapy Intervention in Pediatrics 3.00

OT 620. School Based Practice 2.00

OT 630. Evidence Based Practice 3.00

OT 645. Level I Fieldwork Two 1.00

OT 691. Occupational Therapy Tutorial Group II 1.00

Total: 13 Credit Hours

Spring: Year Two

OT 640. Occupational Therapy Intervention Throughout Adulthood 4.00

OT 651. Community and Health Practice in Occupational Therapy 4.00

OT 561. Therapeutic Media in Occupational Therapy 2.00

Total: 12 Credit Hours

Spring: Year One

OT 555. Level I Fieldwork One 1.00

OT 560. Sensorimotor Foundations of Occupational Engagement 3.00

OT 580. Occupational Dysfunction - Cause and Impact 3.00

OT 590. Foundations of Research in Occupational Therapy 3.00

OT 585. Psychosocial Perspectives in Occupational Therapy Practice 3.00

OT 591. Occupational Therapy Tutorial I 1.00

Total: 14 Credit Hours

OT 655. Level I Fieldwork Three 1.00

OT 692. Occupational Therapy Tutorial Group III 1.00

Total: 10 Credit Hours

Summer: Year Two

OT 663. Policy Analysis and Systems of Service Provision 3.00

OT 665. Level II Fieldwork One 6.00 (12 week placement)

Total: 9 Credit Hours

Fall: Year Three

OT 675. Level II Fieldwork Two 6.00 (12 week placement)

OT 680. Independent Study in Occupational Therapy 3.00

Total: 9 Credit Hours

Note: Level II fieldwork must be completed within 24 months of completion of didactic course work.

Physician Assistant Studies, M.P.A.S.

Phone: (540) 568-2395

Academic Unit Head

Dr. Kirk Armstrong

Website: <http://www.healthsci.jmu.edu/PA>

Graduate Program Director

Mr. Gerald Weniger

Email: paprogram@jmu.edu

Medical Director

Dr. Abby Massey

Mission

The Master of Physician Assistant Studies program prepares students for clinical positions as primary care physician assistants. The course of study requires 28 consecutive months of work for students who have met the prerequisite requirements and been admitted to the program. Admission is limited and competitive. Students must be admitted to The Graduate School and to the PA master's degree program via separate application processes.

Physician assistants are highly skilled medical professionals who have for over 45 years functioned as members of a team delivering quality healthcare. Working with physicians, PAs provide medical services traditionally performed by physicians. These services include taking medical histories, performing physical examinations, ordering and interpreting tests, diagnosing and treating medical conditions, educating and counseling patients, performing minor medical/surgical procedures, and, in most states, prescribing medications. The PA's duties are determined by physician supervision as defined by law.

PAs practice in the same settings as physicians, i.e., outpatient facilities, private and public clinics, managed care and other systems, and in rural and urban areas. The focus of the JMU program is primary care medicine.

Accreditation

The PA program is accredited by the Accreditation Review Commission on Education for the Physician Assistant, Inc. Accreditation provides graduates eligibility to take the Physician Assistant National Certifying Examination (PANCE). Successful completion of the PANCE is required for graduates to be licensed to practice.

Admission Requirements

For consideration of admission to the physician assistant program, candidates must successfully complete the requirements of The Graduate School and of the PA program.

- A bachelor or higher degree from a regionally accredited college or university.
- Overall grade point average (GPA) of 3.0 or higher is preferred.
- Satisfactory test scores from the Graduate Record Examination (GRE). (The code is 5392)
- Official transcripts from all colleges or universities attended.

Prerequisites

These program prerequisites must be accomplished prior to beginning the PA curriculum in August, but are not required prior to applying for admission to the program. Applications for admission are due by August 1. There are two separate applications for the admission process: one to the JMU graduate school and one to the PA program through CASPA. Candidates must complete both applications to be considered.

All prerequisite course work must have been completed within the past seven years:

- Successfully complete the following prerequisite courses work at the "B", 3.0 level or better:
 - Human or mammalian physiology – a one semester course
 - Human or mammalian anatomy – a one semester course
 - Anatomy must include laboratory work either as a component of the anatomy course or as a separate laboratory course.
- Successfully complete the following prerequisite course work at the "C", 2.0 level or better:
 - Biochemistry – a one semester course (Organic chemistry and courses combining general or organic chemistry with biochemistry in a single course do not meet this requirement.)
 - Genetics – a one semester course
 - Microbiology – a one semester course.
- Successfully complete the following prerequisite course within any number of years: Medical Terminology

Completion of course work within the last seven years assures some degree of current information in these fields. Some working positions require people to maintain an adequate degree of current information in these basic sciences. Candidates employed in such positions should apply and include an explanation to assure the admissions committee how they have maintained a degree of current information in these fields. The committee will decide whether or not to accept the explanation as sufficient to meet the prerequisites.

A minimum of 1,000 hours of direct patient contact health care experience is required. These hours may come from one experience or a combination of experiences and may be voluntary or paid work. Experiences having higher levels of training and responsibility are more desirable. Examples of health care professions that require direct patient contact include nurse, EMT or paramedic, corpsman, patient care technician, nurse's aide, surgical assistant, clinic/medical assistant, respiratory technologist, radiology technologist, medical technologist, mental health worker and clinical research assistant. Other professions and experiences not listed may also qualify as direct patient care.

Healthcare related professions that generally do not include hands-on patient contact include transporter, CPR or ACLS instructor, lifeguard, non-clinical research assistant, candy striper, unit clerk and others. Although desirable for other reasons, PA shadowing and student/intern experience do not count toward the required 1,000 hours of patient care experience. Please contact us if you have any questions regarding your healthcare experience.

Many communications between students and the program are carried out through email. Course assignments and testing are frequently done via computer systems. Students are expected to possess basic computer skills – word processing, emailing, utilizing the internet. Students will need the computer hardware to access the internet and email during the clinical year. During the classroom component of the program they may use either their own computer or a university computer laboratory.

Candidates may meet the anatomy and physiology prerequisites by taking a semester course in each topic or by taking the entire sequence of combined anatomy & physiology courses at a single college. The combined courses must cover all of the body systems and regions and must include a laboratory component in anatomy.

Candidates whose prior education is through international schools should consult the "International Student Applications" section of the Graduate Catalog for additional features of the application process.

Application Deadlines

One cohort of 30 students is admitted each year. Classes begin in the fall semester. For deadlines for application to The Graduate School, see Admission to The Graduate School. The deadline for application to the physician assistant program through CASPA is August 1.

Application Evaluation Criteria

Candidates are evaluated through review of their written application. Superior candidates are invited to on-campus interviews. The following characteristics, skills and accomplishments are assessed.

Academic Preparation

Academic preparation is evaluated in terms of overall grade point average (GPA), science GPA, recent course work and performance in the prerequisite courses. Prior academic work is also evaluated for the candidate's ability to successfully carry a full-time, science-based academic workload. Patterns of repeating and withdrawing from courses as well as consistency in achievement are considered.

Communication Skills

A high degree of proficiency in speaking, reading and writing in English is required. Proficiency in additional languages, though not required, is favorably considered.

Professionalism

Candidates must demonstrate professional characteristics such as judgment, motivation, ethical behavior, maturity of insight, problem solving, self-awareness, self-confidence and team skills essential to PA practice and a realistic understanding and approach to the rigors of the PA curriculum.

Health Care Experience

Direct patient-contact healthcare experience is evaluated in terms of both quantity and quality. The total amount of experience, the level of responsibility held by the candidate and how it may relate to work as a future PA are all considered.

Fit with the Program Mission & Goals – Serving Society

Evaluation includes determining that the candidate's concepts of the PA profession are realistic and contribute to the program meeting its mission and goals. In keeping with the program mission, candidates are evaluated for potential to serve in a wide variety of medical settings. Factors considered include the settings of prior healthcare and professional accomplishments, experience in urban, rural and other underserved areas, or in working with vulnerable populations.

Waitlist Review

Once all applicant interviews are complete, the admissions committee will review the applicants who had been previously placed on the waitlist. When all of the above five selection factors are equal, the admissions committee may then choose to admit these final few waitlist applicants so as to maintain an approximate ratio of 2/3 Virginia residents and 1/3 out-of-state residents.

Program Policies

Academic standards: The PA Program defines satisfactory academic progress as achieving at least a "B," or 3.0, grade in each course. The PA Academic Review Committee reviews all performance that falls below this standard. In accord with each circumstance, the committee recommends a course of action to the department head. Students do not progress to clinical rotations until the committee is satisfied that they have achieved minimal mastery of the didactic course work of the first year. The policies of The Graduate School regarding unsatisfactory progress also apply.

Advanced standing: Students are required to take all the courses in the curriculum at JMU. No advanced standing is given for experience, transfer credit or credit by exam.

Scheduling: The PA program is a full-time curriculum. Students are required to take courses in the sequence and during the semesters they are scheduled. There is no part-time or extended time option.

Clinical rotations: Rotations during the clinical year are done at sites distant from the university. Students must have transportation and must pay for secondary housing and transportation costs. The program assigns students to multiple clinical sites during the clinical year. Students do not choose the sites of their clinical rotations.

The physician assistant program requires a criminal background check as well as drug screening testing. The expenses of these will be an incurred expense by the enrolled student.

Curriculum

All courses are required and must be taken in sequence. Students must be full-time and must take the curriculum in a consecutive 28-month period. Exceptions are rare and are granted only by the program director. The classroom or didactic component of the curriculum is 16-months or four semesters long. The clinical year is 12-months in length.

Fall Semester Year One

BIO 513. Human Gross Anatomy with Clinical Applications 9.00

BIO 516. Pathophysiology for Physician Assistants I 6.00

PA 510. Physical Diagnosis I 4.00

PA 540. The Physician Assistant Profession 1.00

Total: 20 Credit Hours

Spring Semester Year One

BIO 517. Pathophysiology for Physician Assistants II 6.00

PA 520. Clinical Medicine I 6.00

PA 532. Pharmacology I 4.00

PA 551. Medical Biostatistics 3.00

Total: 19 Credit Hours

Summer Session Year One (12 weeks)

HTH 659. Health Care Environment 3.00

PA 511. Physical Diagnosis II 3.00

PA 621. Clinical Medicine II 5.00

PA 622. Women's Medicine 2.00

PA 624. Behavioral Medicine 2.00

PA 630. Diagnostic Methods I 2.00

Total: 17 Credit Hours

Fall Semester Year Two

PA 623. Pediatric Medicine 2.00

PA 626. Clinical Medicine III 5.00

PA 631. Diagnostic Methods II 2.00

Rotating Courses

These courses rotate during the ten Clinical Rotation Periods. The sequencing of these courses will vary with each student.

Course

Each course lasts 4 weeks.

PA 670. Elective Clinical Rotation 2.00

PA 671. Family Medicine Clinical Rotation I 2.00

PA 672. Primary Care Clinical Rotation 2.00

PA 673. Internal Medicine Clinical Rotation I 2.00

PA 674. Internal Medicine Clinical Rotation II 2.00

PA 633. Pharmacology II 3.00

PA 652. Clinical Problem Solving 3.00

PA 653. Research Design and Implementation 1.00

Total: 18 Credit Hours

Spring Semester Year Two

PA 625. Health Promotion and Disease Prevention 1.00

Rotation Period 1 2 Credit Hours

Rotation Period 2 2 Credit Hours

Rotation Period 3 2 Credit Hours

Rotation Period 4 2 Credit Hours

Total: 9 Credit Hours

Summer Session Year Two

PA 643. Values and Ethics in Medicine 3.00

Rotation Period 5 2 Credit Hours

Rotation Period 6 2 Credit Hours

Rotation Period 7 2 Credit Hours

Total: 9 Credit Hours

Fall Semester Year Three

PA 642. Transition to Physician Assistant Practice 1.00

PA 654. Capstone Project 2.00

Rotation Period 8 2 Credit Hours

Rotation Period 9 2 Credit Hours

Rotation Period 10 2 Credit Hours

Total: 9 Credit Hours

Total: 101 Credit Hours

PA 675. Pediatrics Clinical Rotation 2.00

PA 676. Obstetrics and Gynecology Clinical Rotation 2.00

PA 677. General Surgery Clinical Rotation 2.00

PA 678. Emergency Medicine Clinical Rotation 2.00

PA 679. Behavioral Medicine Clinical Rotation 2.00

Political Science, European Union Policy Studies Concentration, M.A.

Political Science

Department Head: Dr. Jonathan Keller

Phone: (540) 568-6149

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

Graduate Program Director: Dr. John Scherpereel

Academic Coordinator: Caterina Paolucci

Professors

J. Adolino, C. Blake, J. Chen, K. Ferraiolo, J. Scherpereel, V. Sulfaro

Associate Professors

J. Hulsey, T. LaPira

Assistant Professors

C. Watkins

Adjunct Instructors

E. Koundouraki, C. Steindler

Admission Criteria and Degree Requirements

The JMU graduate school requires that prospective students submit official transcripts of all undergraduate and graduate course work. International students must achieve a TOEFL score of at least 570 for the paper-based version and 88 for the electronic version. The Department of Political Science requires that students submit a written statement of educational and professional goals, a writing sample that demonstrates an ability to carry out academic and/or policy-relevant research or GRE examination scores, curriculum vita or resume, and two current letters of recommendation from professors, employers and other professionals qualified to judge the applicant's ability to complete graduate studies. Students must also submit a statement of language proficiency and a statement of policy interest.

Once admitted to the program, to remain in good academic standing students must comply with the requirements of the JMU graduate school and those imposed by the political science program. Students must complete the EU Policy Studies (EUPS) concentration in a consecutive 11-month period. Students withdrawing from the EUPS concentration may be permitted to re-enter the program at the same point in subsequent years. Students must meet The Graduate School requirement of a 3.0 GPA or higher to qualify for graduation.

Mission

The Master of Arts in Political Science program focuses on comparative and international politics. This program is designed to directly engage students in comparative and international politics via studies abroad and practical experience.

Learning Objectives

When students complete the Master of Arts in Political Science program, they should have:

- Comprehensive knowledge of the relevant subfields of political science that pertain to their area of concentration in the program.
- Comprehensive knowledge of the processes that shape politics and policies and the complex interrelationships of political, economic, cultural and ideological interests that influence them in their concentration area.
- Expertise in contemporary policy issues in political science in their concentration area including international security, immigration, human rights, environmental protection, welfare provision, health and human services, and information technology and their underlying political philosophies.
- Analytic and language skills, the ability to express themselves in written and verbal form, the ability to formulate and execute a final in-depth project or apply their learning and skills in a practical situation, and broad intercultural competence.

European Union Policy Studies Concentration

This concentration involves an intellectually rigorous program with a theoretical and practical orientation. It provides students with a comprehensive understanding of the political science literature on the European Union in general (its historical development, current institutions, and practices and future prospects).

The European Union policy studies concentration also places particular emphasis on public policy in two domains: economic and social policy, and foreign policy and internal security. Students will focus their studies on one of these policy areas. The concentration is designed as a one-year residential program based in Florence, Italy.

This concentration is intended:

- to improve understanding of the European Union as a system of governance and as a multinational actor;
- to promote awareness and understanding of the growing importance and expanding scope of the transatlantic partnership between the European Union and the United States; and
- to train students to be effective future participants in this partnership.

Concentration Requirements

POSC 603. The Political Institutions of the European Union 3.00

POSC 604. Policy-Making Processes 3.00

POSC 605. Comparative European Politics 3.00

POSC 620. The EU: Contemporary Issues and Controversies 3.00

POSC 640. Policy Analysis and the European Union 3.00

POSC 643. The Transatlantic Relationship and the Challenges of Globalization 3.00

POSC 644. Research in Policy Dynamics 3.00

POSC 690. Tutorial in EU Policy Studies 6.00

POSC 692. EU Seminar 3.00

Choose one of the following: 3 Credit Hours

POSC 641. Topics in Economic and Social Policy 3.00

POSC 642. Topics in Foreign Policy and Internal Security 3.00

Total: 33 Credit Hours

Typical Curriculum for European Union Policy Studies

Fall Semester

POSC 603. The Political Institutions of the European Union 3.00

POSC 604. Policy-Making Processes 3.00

POSC 605. Comparative European Politics 3.00

POSC 620. The EU: Contemporary Issues and Controversies 3.00

Total: 12 Credit Hours

Spring Semester

POSC 640. Policy Analysis and the European Union 3.00

POSC 643. The Transatlantic Relationship and the Challenges of Globalization 3.00

POSC 644. Research in Policy Dynamics 3.00

Choose one of the following: 3 Credit Hours

POSC 641. Topics in Economic and Social Policy 3.00

POSC 642. Topics in Foreign Policy and Internal Security 3.00

Total: 12 Credit Hours

Summer Semester

POSC 690. Tutorial in EU Policy Studies 6.00

POSC 692. EU Seminar 3.00

Total: 9 Credit Hours

Psychological Sciences, M.A.

Program Director: Dr. Jeff Dyche

Concentration Coordinator: Dr. Robert Harmison

Website: <http://www.psyc.jmu.edu/psycsciences/>

Admission Requirements

- Completion of a baccalaureate degree with a satisfactory grade point average.
- Undergraduate course work in psychology, including at least one statistics and one psychological research methods course.
- Satisfactory scores on the general GRE; subject area GRE desirable (official score reports required).
- Three letters of recommendation from faculty members familiar with previous academic performance and potential for graduate work.
- A curriculum vitae.
- Transcripts from all undergraduate and graduate programs attended.
- Completed application forms, including a statement of research interests, goals for graduate study and beyond, and how the psychological sciences program will help achieve these goals.

Mission

The mission of our program is to provide students advanced empirical research training in the psychological sciences.

Description

The psychological sciences program at James Madison University is a shared program between the Department of Psychology and the Department of Graduate Psychology that fosters the development of students interested in improving their research skills and preparing for doctoral education. The primary function of the program is to develop students' knowledge, skills and abilities in scientific inquiry, methods and analysis and to equip students to apply their research-based training as researchers, consultants and/or practitioners.

At the core of the program is course work in multiple content areas within psychology; course work in statistics, measurement and research design; a research apprenticeship; and a thesis. The culture of the program is consistent with that of doctoral programs, including expectations that students will develop a portfolio of scholarly accomplishments (e.g., publications and conference presentations) and participate in various extra-curricular activities related to their discipline. Regular attendance at program-wide roundtable discussions and concentration-specific meetings is expected and required.

Students develop expertise in a specialty area through selected course work and closely mentored experiences with a faculty adviser. Faculty advisers provide regular support and consultation regarding progress in the program and professional development.

Program Goals

The primary goal of the program is to prepare students to pursue doctoral work; another goal is to prepare students for master's level employment in research-informed occupations.

While enrolled in this program students will:

- become familiar with the major concepts, theoretical perspectives, methodologies and empirical findings in fundamental areas of psychological science.
- develop the skills necessary to independently conduct and critique psychological research.
- acquire communication, information literacy and technology skills at a professional level.
- develop a professional identity that reflects the values of research scientists in psychology.

Master of Arts Degree Requirements

Minimum Requirements¹

	Credit Hours
Psychological Sciences Program Method and Research Core	15
PSYC 605. Intermediate Inferential Statistics	3
PSYC 700. Thesis Research	3
Two additional courses as specified by concentration	6
<i>Content Courses (choose three of the following as specified by concentration):</i>	
PSYC 610. Principles of Behavior Analysis	3
PSYC 613. Cognitive Science	3
PSYC 616. Social Psychology	3
PSYC 624. Neuroscience or PSYC 625. Human Neuropsychology	3
PSYC 690. Experimental Analysis of Behavior	3
Concentration and Elective Courses (as specified by concentration)	12

¹ Before the Department of Graduate Psychology recommends students for graduation, they must have a successful review by the Master of Arts in Psychological Sciences Program Committee.

Purpose

The concentration in applied research is designed for students interested in pursuing a Ph.D. in various areas of psychology with an emphasis on applied research, such as sport psychology, police psychology, positive psychology, motivational psychology, multi-cultural psychology and clinical psychology.

Overview

Faculty and students in the applied research concentration apply diverse methods and findings from psychological science to solve practical problems of the human experience. Students will work in their mentor's specific area of applied psychology throughout their two years of course work, scholarly studies and research.

Other Experiences

In addition to course work and other requirements of the psychological sciences program (e.g., apprenticeship, research roundtable), students participate in a monthly concentration meeting where faculty and students discuss published research and professional issues related to applied psychology.

Psychological Sciences, Applied Research Concentration

Program Director: Dr. Jeff Dyche

Concentration Coordinator: Dr. Robert Harmison

Website: <http://www.psyc.jmu.edu/psycsciences/>

Purpose

The concentration in applied research is designed for students interested in pursuing a Ph.D. in various areas of psychology with an emphasis on applied research, such as sport psychology, police psychology, positive psychology, motivational psychology, multi-cultural psychology and clinical psychology.

Overview

Faculty and students in the applied research concentration apply diverse methods and findings from psychological science to solve practical problems of the human experience. Students will work in their mentor's specific area of applied psychology throughout their two years of course work, scholarly studies and research.

Other Experiences

In addition to course work and other requirements of the psychological sciences program (e.g., apprenticeship, research roundtable), students participate in a monthly concentration meeting where faculty and students discuss published research and professional issues related to applied psychology.

Methodology and Research Core: 15 Credit Hours

PSYC 605. Intermediate Inferential Statistics 3.00

PSYC 608. Multivariate Statistical Methods in Psychology 3.00

PSYC 700. Thesis Research 3.00 - 6.00

One course chosen from the following:

PSYC 602. Psychological Research Methods 3.00

PSYC 606. Measurement Theory 3.00

PSYC 805. Single Case Experimentation 3.00

PSYC 836. Hierarchical Linear Models 3.00

PSYC 840. Qualitative Research Design and Analysis 3.00

Content Courses

9 credits chosen from the following and approved by adviser:

PSYC 610. Principles of Behavior Analysis 3.00

PSYC 613. Cognitive Science 3.00

PSYC 616. Social Psychology 3.00

PSYC 624. Neuroscience 3.00 or PSYC 625. Human Neuropsychology 3.00

PSYC 690. Experimental Analysis of Behavior 3.00

Concentration and Elective Courses: 12 Credit Hours

PSYC 695. Practicum 1.00 - 6.00

Electives (9 credits approved by adviser)

Psychological Sciences, Behavior Analysis Concentration

Program Director: Dr. Jeff Dyche

Concentration Coordinator: Dr. Daniel Holt

Website: <http://www.psyc.jmu.edu/psycsciences/>

Admission Requirements

- Completion of a baccalaureate degree with a satisfactory grade point average.
- Undergraduate course work in psychology, including at least one statistics and one psychological research methods course.
- Satisfactory scores on the general GRE; subject area GRE desirable (official score reports required).
- Three letters of recommendation from faculty members familiar with previous academic performance and potential for graduate work.
- A curriculum vitae.
- Transcripts from all undergraduate and graduate programs attended.
- Completed application forms, including a statement of research interests, goals for graduate study and beyond, and how the psychological sciences program will help achieve these goals.

Mission

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Description

The psychological sciences program at James Madison University is a shared program between the Department of Psychology and the Department of Graduate Psychology that fosters the development of students interested in improving their research skills and preparing for doctoral education. The primary function of the program is to develop students' knowledge, skills and abilities in scientific inquiry, methods and analysis and to equip students to apply their research-based training as researchers, consultants and/or practitioners.

At the core of the program is course work in multiple content areas within psychology; course work in statistics, measurement and research design; a research apprenticeship; and a thesis. The culture of the program is consistent with that of doctoral programs, including expectations that students will develop a portfolio of scholarly accomplishments (e.g., publications and conference presentations) and participate in various extra-curricular activities related to their discipline. Regular attendance at program-wide roundtable discussions and concentration-specific meetings is expected and required.

Students develop expertise in a specialty area through selected course work and closely mentored experiences with a faculty adviser. Faculty advisers provide regular support and consultation regarding progress in the program and professional development.

Program Goals

The primary goal of the program is to prepare students to pursue doctoral work; another goal is to prepare students for master's level employment in research-informed occupations.

While enrolled in this program students will:

- become familiar with the major concepts, theoretical perspectives, methodologies and empirical findings in fundamental areas of psychological science.
- develop the skills necessary to independently conduct and critique psychological research.
- acquire communication, information literacy and technology skills at a professional level.
- develop a professional identity that reflects the values of research scientists in psychology.

Master of Arts Degree Requirements

Minimum Requirements¹

Psychological Sciences Program Method and Research Core

PSYC 605. Intermediate Inferential Statistics

PSYC 700. Thesis Research

Two additional courses as specified by concentration

Content Courses (choose three of the following as specified by concentration):

PSYC 610. Principles of Behavior Analysis

PSYC 613. Cognitive Science

PSYC 616. Social Psychology

PSYC 624. Neuroscience or PSYC 625. Human Neuropsychology

Credit Hours

15

3

3

6

3

3

3

3

¹ Before the Department of Graduate Psychology recommends students for graduation, they must have a successful review by the Master of Arts in Psychological Sciences Program Committee.

Purpose

The behavior analysis concentration is for students interested in pursuing a doctoral degree in behavior analysis or related disciplines (e.g., behavioral pharmacology, behavioral neuroscience, exceptional education); it is also for students interested in pursuing course work and experience requirements to qualify for examination to become a master's-level Board Certified Behavior Analyst (BCBA®).

Overview

In this concentration, students will complete course work, conduct research and participate in practicums designed to facilitate mastery of major concepts, principles, practices and theories in the experimental analysis of behavior, applied behavior analysis and the philosophy of radical behaviorism. Students in this concentration are required to complete their research apprenticeship and thesis requirements through collaborative research activities with faculty who approach the scientific study of behavior from a behavior-analytic conceptual and theoretical framework.

Other Experiences

In addition to course work and other requirements of the psychological sciences program (e.g., apprenticeship, research roundtable), students participate in concentration meetings where faculty and students discuss published research and professional issues related to behavior analysis. Additionally, students in the behavior analysis concentration may participate in the activities of various local, regional, national and international agencies, groups and professional organizations that advance the scientific study of behavior and its humane application to solve practical problems.

Methods and Research Core: 15 Credit Hours

PSYC 605. Intermediate Inferential Statistics 3.00

PSYC 602. Psychological Research Methods 3.00 or PSYC 606. Measurement Theory 3.00 or EXED 501. Workshop in Special Education 3.00 if approved by adviser

PSYC 700. Thesis Research 3.00 - 6.00 The thesis must be an empirical study in either EAB or ABA.

PSYC 805. Single Case Experimentation 3.00

Content Courses: 9 Credit Hours

(As approved by adviser)

PSYC 610. Principles of Behavior Analysis 3.00

PSYC 613. Cognitive Science 3.00 or PSYC 616. Social Psychology 3.00 or PSYC

624. Neuroscience 3.00 or PSYC 625. Human Neuropsychology 3.00

PSYC 690. Experimental Analysis of Behavior 3.00

Concentration and Elective Courses: 12 Credit Hours

Any content course listed above.

Students pursuing BCBA exam eligibility will take the following courses as electives:

PSYC 601. Special Topics in Psychology 1.00 - 3.00 when topic is Ethics and Professional Development

PSYC 695. Practicum 1.00 - 6.00 ¹

EXED 510. Systematic Behavioral Interventions 3.00 ¹

Footnote

¹ Required courses for students pursuing BCBA exam eligibility.

Psychological Sciences, Experimental Psychology Concentration, M.A.

Program Director: Dr. Jeff Dyché

Concentration Coordinator: Dr. Kethera Fogler

Website: <http://www.psyc.jmu.edu/psycsciences/>

Admission Requirements

- Completion of a baccalaureate degree with a satisfactory grade point average.
- Undergraduate course work in psychology, including at least one statistics and one psychological research methods course.
- Satisfactory scores on the general GRE; subject area GRE desirable (official score reports required).
- Three letters of recommendation from faculty members familiar with previous academic performance and potential for graduate work.
- A curriculum vitae.
- Transcripts from all undergraduate and graduate programs attended.
- Completed application forms, including a statement of research interests, goals for graduate study and beyond, and how the psychological sciences program will help achieve these goals.

Mission

The mission of our program is to provide students advanced empirical research training in the psychological sciences.

Description

The psychological sciences program at James Madison University is a shared program between the Department of Psychology and the Department of Graduate Psychology that fosters the development of students interested in improving their research skills and preparing for doctoral education. The primary function of the program is to develop students' knowledge, skills and abilities in scientific inquiry, methods and analysis and to equip students to apply their research-based training as researchers, consultants and/or practitioners.

At the core of the program is course work in multiple content areas within psychology; course work in statistics, measurement and research design; a research apprenticeship; and a thesis. The culture of the program is consistent with that of doctoral programs, including expectations that students will develop a portfolio of scholarly accomplishments (e.g., publications and conference presentations) and participate in various extra-curricular activities related to their discipline. Regular attendance at program-wide roundtable discussions and concentration-specific meetings is expected and required.

Students develop expertise in a specialty area through selected course work and closely mentored experiences with a faculty adviser. Faculty advisers provide regular support and consultation regarding progress in the program and professional development.

Program Goals

The primary goal of the program is to prepare students to pursue doctoral work; another goal is to prepare students for master's level employment in research-informed occupations. While enrolled in this program students will:

- become familiar with the major concepts, theoretical perspectives, methodologies and empirical findings in fundamental areas of psychological science.
- develop the skills necessary to independently conduct and critique psychological research.
- acquire communication, information literacy and technology skills at a professional level.
- develop a professional identity that reflects the values of research scientists in psychology.

Master of Arts Degree Requirements

Minimum Requirements ¹	Credit Hours
Psychological Sciences Program Method and Research Core	15
PSYC 605. Intermediate Inferential Statistics	3
PSYC 700. Thesis Research	3
Two additional courses as specified by concentration	6
Content Courses (choose three of the following as specified by concentration):	
PSYC 610. Principles of Behavior Analysis	3
PSYC 613. Cognitive Science	3
PSYC 616. Social Psychology	3
PSYC 624. Neuroscience or PSYC 625. Human Neuropsychology	3
PSYC 690. Experimental Analysis of Behavior	3
Concentration and Elective Courses (as specified by concentration)	12
	36

¹ Before the Department of Graduate Psychology recommends students for graduation, they must have a successful review by the Master of Arts in Psychological Sciences Program Committee.

Purpose

The concentration in experimental psychology is designed for students interested in pursuing a Ph.D. in various areas of research psychology with an emphasis on basic science such as cognitive psychology, sensation and perception, learning theory and behavioral neuroscience. It also provides a foundation for employment in settings such as in the federal government or private sector.

Overview

Experimental psychology is the area of psychology that utilizes experimental methodology in the science of behavior and mental processes. It is an umbrella term that encompasses the efforts of researchers in several areas of psychology, including biological, perceptual, cognitive, developmental and social psychology. Experimental psychologists seek to identify and understand the structures and processes that underlie behavior, and examine topics such as vision, audition, attention, performance, learning, memory, language, problem solving, reasoning and decision making. Students will work throughout their two years on course work, scholarly studies, and research in their mentor's specific area of experimental psychology. Students may also gain valuable experience as a teaching assistant (e.g., experimental methods) or in comparative approaches to research using our animal research facility.

Other Experiences

In addition to course work and other requirements of the psychological sciences program (e.g., apprenticeship, research roundtable), students participate in a monthly concentration meeting where faculty and students discuss published research and professional issues related to the various topics in experimental psychology. See the psychology website to view representative scholarly work for students in the program.

Methodology and Research Core: 15 Credit Hours

PSYC 602. Psychological Research Methods 3.00 or another methods-related elective (e.g., PSYC 606, PSYC 805, PSYC 836, PSYC 840) approved by adviser
 PSYC 605. Intermediate Inferential Statistics 3.00
 PSYC 608. Multivariate Statistical Methods in Psychology 3.00
 PSYC 700. Thesis Research 3.00 - 6.00

Content Courses: 9 Credit Hours

(Chosen from the following and approved by adviser)

PSYC 610. Principles of Behavior Analysis 3.00
 PSYC 613. Cognitive Science 3.00
 PSYC 616. Social Psychology 3.00
 PSYC 624. Neuroscience 3.00 or PSYC 625. Human Neuropsychology 3.00

PSYC 690. Experimental Analysis of Behavior 3.00

Concentration and Elective Courses: 12 Credit Hours

Any content course listed above (Approved by adviser)
 PSYC 601. Special Topics in Psychology 1.00 - 3.00
 PSYC 604. Computer-Assisted Data Management and Analysis 3.00
 PSYC 606. Measurement Theory 3.00
 PSYC 805. Single Case Experimentation 3.00
 BIO 504. Evolution 3.00
 BIO 550. Neurobiology 4.00
 CSD 523. Psychoacoustics 3.00
 Other courses as approved by adviser.

Psychological Sciences, Quantitative Psychology Concentration

Program Director: Dr. Jeff Dyché

Concentration Coordinator: Dr. Allison J. Ames

Website: <http://www.psyc.jmu.edu/psycsciences/>

Admission Requirements

- Completion of a baccalaureate degree with a satisfactory grade point average.
- Undergraduate course work in psychology, including at least one statistics and one psychological research methods course.
- Satisfactory scores on the general GRE; subject area GRE desirable (official score reports required).
- Three letters of recommendation from faculty members familiar with previous academic performance and potential for graduate work.
- A curriculum vitae.
- Transcripts from all undergraduate and graduate programs attended.
- Completed application forms, including a statement of research interests, goals for graduate study and beyond, and how the psychological sciences program will help achieve these goals.

Mission

The mission of our program is to provide students advanced empirical research training in the psychological sciences.

Description

The psychological sciences program at James Madison University is a shared program between the Department of Psychology and the Department of Graduate Psychology that fosters the development of students interested in improving their research skills and preparing for doctoral education. The primary function of the program is to develop students' knowledge, skills and abilities in scientific inquiry, methods and analysis and to equip students to apply their research-based training as researchers, consultants and/or practitioners.

At the core of the program is course work in multiple content areas within psychology; course work in statistics, measurement and research design; a research apprenticeship; and a thesis. The culture of the program is consistent with that of doctoral programs, including expectations that students will develop a portfolio of scholarly accomplishments (e.g.,

publications and conference presentations) and participate in various extra-curricular activities related to their discipline. Regular attendance at program-wide roundtable discussions and concentration-specific meetings is expected and required.

Students develop expertise in a specialty area through selected course work and closely mentored experiences with a faculty adviser. Faculty advisers provide regular support and consultation regarding progress in the program and professional development.

Program Goals

The primary goal of the program is to prepare students to pursue doctoral work; another goal is to prepare students for master's level employment in research-informed occupations.

While enrolled in this program students will:

- become familiar with the major concepts, theoretical perspectives, methodologies and empirical findings in fundamental areas of psychological science.
- develop the skills necessary to independently conduct and critique psychological research.
- acquire communication, information literacy and technology skills at a professional level.
- develop a professional identity that reflects the values of research scientists in psychology.

Master of Arts Degree Requirements

Minimum Requirements ¹	Credit Hours
Psychological Sciences Program Method and Research Core	15
PSYC 605. Intermediate Inferential Statistics	3
PSYC 700. Thesis Research	3
Two additional courses as specified by concentration	6
Content Courses (choose three of the following as specified by concentration):	
PSYC 610. Principles of Behavior Analysis	3
PSYC 613. Cognitive Science	3
PSYC 616. Social Psychology	3
PSYC 624. Neuroscience or PSYC 625. Human Neuropsychology	3
PSYC 690. Experimental Analysis of Behavior	3
Concentration and Elective Courses (as specified by concentration)	12
	36

¹ Before the Department of Graduate Psychology recommends students for graduation, they must have a successful review by the Master of Arts in Psychological Sciences Program Committee.

Purpose

The purpose of the quantitative psychology concentration is to train students in quantitative methods (e.g., assessment, measurement, applied statistics, program evaluation). The intent of this training is to prepare students for doctoral study in quantitative methods. Students who choose not to pursue doctoral study may be prepared for some entry-level careers in government agencies, non-profit organizations or educational institutions.

Overview

In this concentration, students will expand their study of quantitative methods (statistics, measurement and assessment) while extending their understanding of psychological theories and principles. Students in this concentration are required to complete their research apprenticeship and thesis requirements through collaborative research activities with faculty who are studying or using sophisticated methodology.

Other Experiences

In addition to course work and other requirements of the psychological sciences program (e.g., apprenticeship, research roundtable), students participate in concentration meetings where faculty and students discuss published research and professional issues related to quantitative methods in psychology. Additionally, students in the quantitative methods concentration will become acquainted with and involved in the activities of the Center for Assessment and Research Studies (CARS). Many students in the quantitative methods concentration receive graduate assistantships to work at or with CARS and students graduating from this concentration have an excellent record of being accepted into Ph.D. programs in quantitative psychology and in assessment and measurement.

Methods and Research Core: 15 Credit Hours

PSYC 605. Intermediate Inferential Statistics 3.00

PSYC 606. Measurement Theory 3.00

PSYC 608. Multivariate Statistical Methods in Psychology 3.00

PSYC 700. Thesis Research 3.00 - 6.00

The Thesis Must Be An Empirical Study That Either

focuses on an assessment, measurement or statistical issue or demonstrates the application of sophisticated statistics or measurement techniques.

Content Courses: 9 Credit Hours

(Chosen from the following and approved by adviser)

PSYC 610. Principles of Behavior Analysis 3.00

PSYC 613. Cognitive Science 3.00

PSYC 616. Social Psychology 3.00

PSYC 624. Neuroscience 3.00 or PSYC 625. Human Neuropsychology 3.00

PSYC 690. Experimental Analysis of Behavior 3.00

Concentration and Elective Courses: 12 Credit Hours

For students in this concentration, electives are chosen from a list of quantitative-related courses.

PSYC 604. Computer-Assisted Data Management and Analysis 3.00

Electives approved by adviser 9 Credit Hours

Public Administration, M.P.A.

Academic Unit Head

Dr. Jonathan Keller

Phone: (540) 568-6149

Email: puad@jmu.edu

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

Graduate Director

Dr. Fred Mayhew

Professor

C. Blake

Associate Professors

R. Alexander, F. Mayhew, L. Peaslee, N. Swartz, A. Teye

Assistant Professors

J. Taylor, C. Watkins

Adjunct Instructor

L. Weikart

Admission

The M.P.A. degree is the recognized professional degree in public administration and is appropriate for students pursuing public service careers in government, nonprofit organizations and private sector firms providing services to governments. The MPA program welcomes applications from recent undergraduates and experienced professionals seeking to develop and strengthen a broad set of administrative skills.

To apply, applicants must submit:

- Recent scores from the Graduate Record Examination (GRE) or the Graduate Management Admission Test (GMAT).
- A statement of purpose, outlining professional goals and motivation for pursuing the M.P.A. degree.
- A professional resume summarizing education, work and volunteer experiences.
- Transcripts of all previous undergraduate and graduate work.
- Evidence of successful completion of previous course work in U.S. government and statistics.

Mission

Through engaged teaching, research, and service, the MPA program equips current and future public service professionals with the capacity to address complex local and global problems.

Goals

- To offer a curriculum that allows public administration students to develop and strengthen technical competencies in the following areas: program design, implementation, and evaluation; human resources; budgeting and financial processes; information interpretation via quantitative and qualitative methods; and managerial strategies.
- To improve student understanding of institutional dynamics in the following areas: legal; economical; social; organizational behavior; and political.
- To strengthen student capacity for success in complex and rapidly changing organizations.
- To promote the exercise of responsible leadership.
- To cultivate cultural competency for work in diverse settings.
- To provide outreach activities that engage students in regional communities and organizations.
- To establish the MPA program as a community resource for current and emerging leaders of public service organizations.
- To contribute to the fields of public policy and administration and the effective operation of public service organizations.
- To develop a faculty that is prepared to meet the needs of an evolving and diverse student body and community.
- To maximize the resources of the MPA program by demonstrating high levels of faculty involvement, stakeholder participation, innovative problem-solving and adaptability.

Master of Public Administration

The Master of Public Administration degree requires 36 credit hours of course work and six credits of internship. The internship is not required of "in-service" students, those presently employed or recently employed in a substantive position in the public sector. The curriculum consists of a common component, a concentration and a capstone course. The common curriculum enables students to function effectively in the public and nonprofit sectors. Students will learn concepts of organization, public management, human resource administration, program and policy evaluation, budgeting and administrative law.

There are four defined concentrations: international stabilization and recovery operations, management of international nongovernmental organizations, nonprofit management and public management. In addition, students may design an individualized concentration in consultation with the MPA director. The individualized concentration may draw upon courses in other graduate programs at JMU and graduate courses offered by other accredited institutions with approval from the MPA director.

In addition to a concentration, students who do not have a significant professional work background in administration are expected to complete a supervised internship with a public or nonprofit agency. The internship will support the student's concentration. All students must take the program capstone course in their final semester of study. The capstone emphasizes professional and ethical application and documentation of core public management competencies.

Students admitted to the program must seek advice from the MPA director before registering for classes. The director will also assist students in planning a program of study.

Public Administration, Fifth-Year Format

Five-Year Degree Program

JMU undergraduates may complete their undergraduate degree and the MPA program in five years by meeting admissions requirements of the MPA program and carefully planning their program of study with the MPA director. The five-year MPA program requires 36 graduate credits in academic course work and a professional internship. Students interested in the five-year MPA should meet with the MPA director early in their sophomore year to officially declare their intent to pursue the program.

Students entering the five-year MPA program are not required to major in public administration as undergraduates; they may major in any field. However, they are required to complete the public administration courses listed below while undergraduates and will be required to complete nine hours of graduate credit while still undergraduates. Simultaneous enrollment in both undergraduate and graduate classes may have consequences for financial aid awards. Students are advised to seek guidance from all sources of financial aid prior to enrolling in graduate-level courses.

Students must formally apply to the MPA program, through The Graduate School, during spring of their junior year. As such, interested students must prepare for and plan to take the GRE in the fall of their junior year.

Admission to the graduate program is based on meeting the same criteria as students to the regular, two-year MPA program. Acceptance into the five-year program is conditioned on successful completion of all undergraduate degree requirements and earning a grade of "B" or better in all graduate course work taken prior to completion of the undergraduate degree.

Five-Year Undergraduate Credit Requirements

Undergraduate Curriculum

POSC 225. U.S. Government *4 Credit Hours*

PPA 265. Public Administration *3 Credit Hours*

POSC 295. Research Methods *4 Credit Hours*

PPA 359. Policy Analysis *3 Credit Hours*

Total: 14 Credit Hours

Taking Graduate Courses as an Undergraduate

Graduate credits taken prior to completion of the undergraduate degree do not count toward the undergraduate degree or toward any undergraduate major or minor. Thus, the student must earn at least 120 credit hours in addition to graduate course work taken while still an undergraduate. Written permission to take graduate courses must be obtained from the MPA director and the dean of The Graduate School prior to enrollment. The student should apply for permission during their junior year. The student should complete the following three courses.

Graduate Credit Requirements

Fourth Year Graduate Credit

Fall of Senior Year

PUAD 620. Foundations of Public Administration *3.00*

PUAD 625. Public Organizational Behavior *3.00*

Spring of Senior Year

PUAD 571. Public Financial Management *3.00*

Total: 9 Credit Hours

Fifth Year Graduate Credit

Students must complete the following courses during the fifth year, followed by an internship in the summer.

Fall of Fifth Year

PUAD 605. Research Design for Policy Evaluation *3.00*

PUAD 630. Seminar in Public Personnel Administration *3.00*

Two graduate course in the student's concentration *6 Credit Hours*

Spring of Fifth Year

PUAD 606. Program Evaluation in Public Administration *3.00*

PUAD 641. Public Budgeting *3.00*

PUAD 692. Public Administration Capstone *3.00*

One graduate course in the student's concentration *3 Credit Hours*

Summer of Fifth Year

PUAD 696. Internship in Public Administration *3.00 - 6.00*

Total: 30 Credit Hours

Total Graduate Credits

Fourth Year Graduate Credit *9 Credit Hours*

Fifth Year Graduate Credit *24 Credit Hours*

Internship (summer of fifth year) *6 Credit Hours*

Total: 39 Credit Hours

Public Administration, M.P.A.

Core Curriculum

PUAD 605. Research Design for Policy Evaluation *3.00*

PUAD 606. Program Evaluation in Public Administration *3.00*

PUAD 607. Policy Analysis *3.00*

PUAD 620. Foundations of Public Administration *3.00*

PUAD 625. Public Organizational Behavior *3.00*

PUAD 630. Seminar in Public Personnel Administration *3.00*

PUAD 641. Public Budgeting *3.00*

Internship: 6 Credit Hours

Choose one of the following:

PUAD 696. Internship in Public Administration *3.00 - 6.00*

PUAD 697. Internship in NGO Management *6.00*

Concentration Course Work: 12 Credit Hours

Choose one of the following:

Management in International Nongovernmental Organizations ¹

Nonprofit Management

Public Management

International Stabilization and Recovery

Individualized Concentration

Capstone Course: 3 Credit Hours

PUAD 692. Public Administration Capstone *3.00*

Total: 42 Credit Hours

Footnote

¹ This concentration is only available in summer session as part of the Management in International Nongovernmental Organizations Certificate Program. Students wishing to qualify for a certificate must complete all four courses and, if they have no experience working in nongovernmental organizations, PUAD 697.

Public Administration, Individualized Concentration

Concentration Requirements

Four graduate courses selected in consultation with the MPA director *12 Credit Hours*

Public Administration, International Stabilization and Recovery Concentration, M.P.A.

Concentration Requirements

Choose at least two of the following: 6-9 Credit Hours

POSC 540. Post-Conflict Societies *3.00*

PUAD 572. Contract Management *3.00*

PUAD 573. Economic and Community Development *3.00*

Choose one or two of the following: 3-6 Credit Hours

POSC 665. Governance and Stabilization *3.00*

PUAD 560. Regionalism and Urban Management *3.00*

PUAD 571. Public Financial Management *3.00*

PUAD 626. Strategic Planning and Management *3.00*

PUAD 661. Civil Society and the Nonprofit Sector *3.00*

Total: 12 Credit Hours

Public Administration, Management in International Nongovernmental Organizations Concentration

Concentration Requirements

PUAD 650. Management in International Nongovernmental Organizations *3.00*

PUAD 651. Economics of the International Non-Profit Sector *3.00*

PUAD 652. Politics of International NGOs *3.00*

PUAD 653. Ethics and International NGOs *3.00*

Total: 12 Credit Hours

Public Administration, Nonprofit Management Concentration

Concentration Requirements

Choose four of the following: 12 Credit Hours

PUAD 571. Public Financial Management 3.00

PUAD 572. Contract Management 3.00

PUAD 574. Tools for Public Management 3.00

PUAD 584. Environmental Regulatory Policy and Politics 3.00

Public Administration, Public Management Concentration**Concentration Requirements**

Choose four of the following: 12 Credit Hours

PUAD 512. Seminar in Intergovernmental Relations 3.00

PUAD 560. Regionalism and Urban Management 3.00

PUAD 561. Education and Social Policy 3.00

PUAD 562. Social Welfare and Local Government Policy 3.00

PUAD 572. Contract Management 3.00

PUAD 615. Legal Environment of Public Administration 3.00

PUAD 661. Civil Society and the Nonprofit Sector 3.00

PUAD 662. Governance and Accountability of Nonprofit Sector Organizations 3.00

PUAD 663. Philanthropy and Volunteerism 3.00

Total: 12 Credit Hours

PUAD 573. Economic and Community Development 3.00

PUAD 574. Tools for Public Management 3.00

PUAD 584. Environmental Regulatory Policy and Politics 3.00

PUAD 615. Legal Environment of Public Administration 3.00

Total: 12 Credit Hours

School Psychology, M.A./Ed.S.

Program Director: Dr. Tammy Gilligan

Phone: 540-568-6439

Website: <http://psyc.jmu.edu/school/index.html>

Admission Requirements

The minimum admission requirements for the school psychology program include:

- Completion of a baccalaureate degree with a satisfactory grade point average.
- 18 hours of undergraduate psychology including three hours of statistics.
- Satisfactory scores on the general portion of the GRE.
- A personal interview with faculty and students, if invited.
- A personal statement.
- A current professional curriculum vitae.
- Three letters of recommendation from professionals familiar with the applicant's potential for graduate education including at least two from their academic institution.
- Transcripts from all undergraduate and graduate programs attended.
- Minimum admission requirements for the educational specialist degree in school psychology include a 3.5 grade point average and satisfactory review by the School Psychology Program Committee. Students applying to the program with a related master's degree from another institution will be required to provide three references and to participate in the interview process.

Mission

The school psychology program at James Madison University, housed within the Department of Graduate Psychology, resides within the College of Health and Behavioral Studies (CHBS) and is fully accredited by the National Association of School Psychologists (NASP). The program emphasizes the role of the culturally competent school psychologist as that of a facilitator of an individual's overall well-being and potential. Within an integrated theoretical framework, students are prepared to be culturally competent, interpersonally skilled, data-oriented problem solvers. Central to the program focus is the understanding of children within a systems context, including the family, the school and the socio-cultural environment. Students are prepared in assessment for intervention, prevention and promotion of wellbeing; counseling; educational and mental health consultation; behavioral and cognitive interventions; and applied research. They are prepared to be applied child and adolescent psychologists in diverse educational and mental health settings.

The program expects students to have a commitment to academic excellence, personal growth, professional responsibility, sensitivity to and understanding of human diversity, and effective interpersonal relationships.

A Master of Arts (M.A.) degree is awarded at the completion of Level I of the program and a comprehensive examination.

Additional Information

Students must complete all program requirements to be recommended for certification or licensure. Certain courses may be waived or substituted with adviser approval. Only six credit hours of PSYC 800 may be used to satisfy program requirements for the educational specialist degree. If the research project is not completed by the end of the internship year, then the student must continuously enroll (each semester including summers) until the project is completed.

School Psychology Educational Specialist Degree Requirements –Level I

Minimum Requirements

PSYC 525. Role and Function of the School Psychologist 3.00

PSYC 527. Psychological Foundations of Education 3.00

PSYC 605. Intermediate Inferential Statistics 3.00

PSYC 606. Measurement Theory 3.00

PSYC 618. Social and Emotional Development 3.00

PSYC 626. Advanced Developmental Psychopathology 3.00

PSYC 661. Counseling Techniques 3.00

PSYC 674. Assessment I 3.00

PSYC 695. Practicum 1.00 - 6.00 (to be taken for 3 credit hours)

PSYC 749. Multicultural Perspectives in Intervention 3.00

PSYC 777. Assessment II 3.00

Total: 33 Credit Hours

School Psychology Educational Specialist Degree Requirements –Level II

Minimum Requirements

PSYC 609. Applied Research Methods 3.00

PSYC 713. Professional Practice Issues in Rural School Psychology Practice 3.00

PSYC 750. Consultation and Intervention Techniques 3.00

PSYC 751. Psychotherapy with Children and Adolescents 3.00

PSYC 755. Cognitive and Behavioral Interventions 3.00

PSYC 778. Advanced Practicum 1.00 - 6.00 (to be taken for 6 credit hours)

PSYC 779. Assessment III 3.00

PSYC 790. Internship 3.00 - 6.00 (to be taken for 9 credit hours)

PSYC 800. Educational Specialist Research Project 1.00 - 3.00 (to be taken for 6 credit hours)

PSYC 880. Introduction to Child and Adolescent Neuropsychology 3.00

LED 658. Practicum in Literacy Assessment and Intervention I 3.00

Total: 45 Credit Hours

Speech-Language Pathology (Clinical), M.S.

The Department of Communication Sciences and Disorders offers two concentrations in the Master of Science program. One is the Master of Science in Speech-Language Pathology. This is a clinical concentration designed to prepare individuals to practice as speech-language pathologists. The second is the Master of Science in Communication Sciences and Disorders. It is a non-clinical concentration designed for individuals who seek concentrated study in one or more areas of human communication sciences and/or communication disorders without clinical preparation as audiologists or speech-language pathologists.

Because this concentration provides the opportunity for more in-depth study in selected concentrations and involves students in active participation in research, it is one avenue to lay a solid foundation in communication sciences and disorders research, particularly for those individuals wanting to pursue further study at the Ph.D. level but not interested in the clinical credentials.

M.S. in Speech-Language Pathology (Clinical)

The master's degree program in speech-language pathology is designed to provide a broad spectrum of academic and practicum experiences necessary for the education of specialists who deal with disorders of human communication and swallowing.

Clinical practical experiences are available in a wide range of professional settings including the JMU Speech-Language-Hearing Clinic, various hospital and rehabilitation programs, and the public schools. The academic and clinical components of the program are consistent with the requirements for certification in speech-language pathology of the American Speech-Language-Hearing Association and for health and education licensure in speech-language pathology by the commonwealth of Virginia. Applicants should have completed prerequisite undergraduate course work in communication sciences and disorders and/or related areas of study.

Most students will be admitted as traditional on-campus students. However, the department also participates in a statewide collaborative online master's program, Distance Learning in Virginia – Educating Speech-Language Pathologists (DLVE-SLP), funded by a grant from the Virginia Department of Education. A few students who meet DLVE-SLP candidacy, including all prerequisite course work, may be admitted to the JMU master's program to undertake their master's degree in the primarily online program. These students will complete the program listed below for DLVE-SLP students. Although many of the requirements are completed in an online mode, interested individuals should be aware that there will be some on-campus requirements. These are typically scheduled for the summer period. Students interested in the DLVE-SLP program should consult <http://dlve-slp.cisat.jmu.edu/> for more detailed information and the name of a contact person prior to applying.

Admission Requirements (for on-campus and online programs)

- Completion of a bachelor's degree with a minimum 3.25 grade point average in major course work.
- Successful completion of any undergraduate prerequisite courses.
- General GRE scores (verbal, quantitative and writing).
- Names of two individuals that may serve as recommenders. We do not request letters of recommendation.

M.S. in Speech-Language Pathology Requirements (on-campus)

Required Courses

CSD 500. Research in Communication Sciences and Disorders 2.00
CSD 522. Communication Disorders of the Traumatically Brain Injured 2.00
CSD 527. Aging and Communication 1.00
CSD 528. Autism 1.00
CSD 529. Augmentative Communication 1.00
CSD 530. Early Intervention 1.00
CSD 544. Evaluation and Treatment of Swallowing Disorders 3.00
CSD 560. Neuromotor Speech Disorders 3.00
CSD 604. Neuroanatomy and Neurophysiology of Speech & Language 3.00
CSD 605. Physiological and Acoustical Phonetics 3.00
CSD 623. Pediatric Speech Sound Disorders 3.00
CSD 625. Pediatric Dysphagia 1.00
CSD 632. Processes and Disorders of Speech Fluency 2.00
CSD 640. Advanced Children's Language Disorders 3.00

CSD 641. Language Disorders in Adults 3.00
CSD 656. Voice Disorders 2.00
Clinical Practicum
CSD 581. Speech Practicum A 2.00
CSD 582. Speech Practicum B 2.00
CSD 583. Speech Practicum C 2.00
CSD 682. Speech Practicum D 2.00
CSD 683. Speech Practicum E 2.00 - 7.00 or CE 650. Graduate Internship 1.00 - 5.00
Electives
CSD 515. Human Communication and Aural Rehabilitation 3.00
CSD 520. Advanced Sign Language 3.00
CSD 680. Reading and Research 1.00 - 3.00
CSD 700. Thesis Research 1.00 - 6.00
Total: 44 Credit Hours (minimum)

M.S. in Speech-Language Pathology Requirements (online via DLVE-SLP)

Students interested in the DLVE-SLP program should consult <http://www.csd.jmu.edu/dlve-slp/> for more detailed information and the name of a contact person.

Required Courses

CSD 500. Research in Communication Sciences and Disorders 2.00
CSD 522. Communication Disorders of the Traumatically Brain Injured 2.00
CSD 527. Aging and Communication 1.00
CSD 528. Autism 1.00
CSD 529. Augmentative Communication 1.00
CSD 530. Early Intervention 1.00
CSD 544. Evaluation and Treatment of Swallowing Disorders 3.00
CSD 560. Neuromotor Speech Disorders 3.00
CSD 604. Neuroanatomy and Neurophysiology of Speech & Language 3.00
CSD 605. Physiological and Acoustical Phonetics 3.00
CSD 623. Pediatric Speech Sound Disorders 3.00
CSD 625. Pediatric Dysphagia 1.00
CSD 632. Processes and Disorders of Speech Fluency 2.00
CSD 640. Advanced Children's Language Disorders 3.00

CSD 641. Language Disorders in Adults 3.00
CSD 656. Voice Disorders 2.00
Clinical Practicum
CSD 581. Speech Practicum A 2.00
CSD 582. Speech Practicum B 2.00
CSD 583. Speech Practicum C 2.00
CSD 682. Speech Practicum D 2.00
CSD 683. Speech Practicum E 2.00 - 7.00 or CE 650. Graduate Internship 1.00 - 5.00
Electives
CSD 515. Human Communication and Aural Rehabilitation 3.00
CSD 520. Advanced Sign Language 3.00
CSD 680. Reading and Research 1.00 - 3.00
CSD 700. Thesis Research 1.00 - 6.00
Total: 44 Credit Hours (minimum)

Sport and Recreation Leadership, M.S.

Campus Recreation Concentration

This concentration is designed for students who wish to pursue a career in campus recreation in higher education settings. Students who complete the campus recreation requirements are prepared to work at all levels of campus recreation, such as administration, event management, operations, programming, and facility management. A three-credit internship is required for this concentration in the non-thesis option.

Required Courses

Core Courses: 15 Credit Hours

SRL 630. Facilities and Operations in Campus Recreation 3.00

SRL 640. Group and Team Development: Theory, Research and Facilitation in Campus Recreation 3.00

SRL 646. The American College Student 3.00

SRL 660. Programming in Campus Recreation 3.00

Choose one of the following:

Non-Thesis Option:

SRL 685. Internship in Sport and Recreation Leadership 3.00 and

Elective

Thesis Option:

SRL 700. Thesis Research 3.00

(Students will enroll in SRL 700. Thesis Research for two consecutive semesters upon completion of 18 credit hours.)

Sport and Recreation Concentration

Students who complete the sport and recreation concentration requirements will be prepared to work in all segments of the sport and recreation industry. Graduates of this concentration will find employment in areas such as high school and college coaching and athletic administration; professional and amateur sport associations; public, private, and non-profit agency administrators; parks and recreation agencies; and youth sports programs.

Sport and Recreation Requirements

Required Courses

SRL 520. Philosophy in Sport and Recreation 3.00

SRL 600. Administration in Sport and Recreation 3.00

SRL 610. Marketing and Promotions in Sport and Recreation 3.00

SRL 620. Facilities and Event Management in Sport and Recreation 3.00

Core Courses: 15 Credit Hours

Choose one of the following:

Non-Thesis Option:

SRL 670. Advanced Event Planning and Management in Sport and Recreation 3.00

One of the following (with SRL graduate director approval):

SRL 685. Internship in Sport and Recreation Leadership 3.00 or

Elective

Thesis Option:

SRL 700. Thesis Research 3.00

(Students will enroll in SRL 700. Thesis Research for two consecutive semesters upon completion of 18 credit hours.)

Writing, Rhetoric, and Technical Communication

Academic Unit Head

Dr. Traci Zimmerman

Location: Harrison Hall, Suite 2257

Phone: (540) 568-6004

Website: <http://www.jmu.edu/wrtc/graduate/index.shtml>

Graduate Program Director

Dr. Jennifer Almjeld (Fall 2019)

Dr. S. Scott Lunsford (Spring 2020)

Professors

L. Burton, S. O'Connor, K. Schick, T. Zimmerman

Associate Professors

J. Almjeld, A. Crow, S. Ghiaciuc, M. Klein, S. Lunsford, S. McCarthy, E. Pass, M. Smith, J. Zimmerman

Assistant Professors

L. De Hertogh, C. Molloy, A. Parrish, V. Rouillon

Admission Criteria

Admission decisions will be based on the following:

- Official transcripts from all colleges or universities attended.
- Three letters of recommendation from people who are qualified based on direct experience with the student to comment on the applicant's academic preparation and professional experience.
- A research statement that explains how the graduate program relates to the applicant's prior experience, how specific faculty research agendas speak to the applicant's own interests and how the program fits into his or her long-term professional or academic goals.
- 20-30 pages (or the equivalent) of academic and/or professional work samples (essays, reports, proposals, websites, visual campaigns, etc.) comprised of one or more documents.

Applications for admission will be reviewed beginning on February 1. However, we will continue to consider applications for fall admission on a rolling basis until April 1 or until all available seats in the program are filled.

There are many areas on campus that offer assistantships, including WRTC. Graduate students interested in assistantships should go to JMU JobLink at <https://www.jmu.edu/humanresources/recruitment/joblink.shtml> to search for available positions.

All applicants to the WRTC program will be considered for available funding from WRTC. Admission to the program does not guarantee funding through WRTC.

Mission

The School of Writing, Rhetoric and Technical Communication is a community committed to preparing its students – both writers and technical and scientific communicators – for lives of enlightened, global citizenship.

The specific goals of the master's degree are to help students:

- Define what effective communication means in writing, rhetoric and technical communication environments.
- Enhance their understanding of how and why communication works.
- Learn how to identify and eliminate barriers to effective communication.
- Improve the efficiency and effectiveness of their communication management.
- Develop research skills.

To achieve these goals, the program combines work in theory, writing, text design and analysis of communication systems and contexts to help students to acquire the knowledge and skills needed to begin careers in writing, rhetoric and technical communication. The program emphasizes scholarly, humanistic and social scientific perspectives on the function and application of writing, rhetoric and technical communication.

Consequently, the program provides students with not only the knowledge and skills required for careers in industry, business or government but also the research skills and communication theory that will prepare them for doctoral study in communication and rhetoric. The long-range goal of the degree, then, is to enable program graduates to grow as professionals and, ultimately, to contribute to the developing field of writing, rhetoric and technical communication.

Degree candidates must successfully complete a minimum of 33 credit hours of graduate course work, which includes a minimum of two semesters of course work completed at JMU. Students work with school advisers to design a program that fits their unique educational needs and career aspirations. Depending on their backgrounds and options they might choose to pursue while in the degree program, students may decide to take course work beyond the required 33 hours to obtain additional knowledge or skills in specialized areas. For example, students may choose to take extra course work to enhance their skills in communication technologies or to deepen their academic training in the writing, rhetoric and technical communication content areas in which they intend to work as professional writers or editors.

Degree Requirements

Students in the program must successfully complete three required courses (nine credit hours), two courses of thesis or internship hours (six credit hours) and six courses of WRTC electives (18 credit hours). For students wanting to focus their studies on emerging educational technologies, the school offers an M.S. degree. Students complete the degree by taking a nine credit-hour cognate in educational technology in place of nine credit hours of WRTC electives.

At least 18 of the students' credit hours must come from course work at the 600 level or above. Up to six of those hours may be WRTC 700. Thesis or WRTC 701. Internship .

The WRTC graduate program encourages applicants with diverse academic and professional backgrounds, including (but certainly not limited to) biology, business, computer science, education, English, geography, mathematics, philosophy, political science, psychology, rhetoric and composition, or writing.

Writing, Rhetoric, and Technical Communication, M.A.

Capstone

Degree candidates have two options for satisfying the capstone requirement for the master's degree:

- Complete a research-based master's thesis on a relevant topic.
- Complete a 300-hour internship with an external client on a relevant topic.

It is important that the student understand that he/she is solely responsible for the success of the thesis/internship. The student needs to be in charge of completing all paperwork for the school, The Graduate School, registrar, etc., and for meeting all deadlines to matriculate successfully. The student will need to contact these offices well ahead of the semester in which he/she plans to graduate to ensure that all deadlines can and will be met.

Comprehensive Exam

All students must pass a comprehensive exam in the form of a defense of their capstone project.

Course Requirements

Core: 9 Credit Hours

WRTC 500. Critical Questions in Writing, Rhetoric and Technical Communication 3.00

WRTC 504. Professional Editing in Writing, Rhetoric and Technical Communication 3.00

WRTC 508. Research Methods in Writing, Rhetoric and Technical Communication 3.00

Thesis or Internship: 6 Credit Hours

WRTC 700. Thesis 3.00 - 6.00 or WRTC 701. Internship 3.00 - 6.00

At least six WRTC or other approved electives: 18 Credit Hours

WRTC 550. Organizational Communication 3.00

WRTC 595. Special Topics in Writing, Rhetoric and Technical Communication 3.00

WRTC 604. Ethics in Communication 3.00

WRTC 608. Intercultural Literacies 3.00

WRTC 610. Publication Management 3.00

WRTC 612. Teaching Writing 3.00

WRTC 624. Public Work of Rhetoric 3.00

WRTC 628. Genre in Action 3.00

WRTC 630. Legal Writing 3.00

WRTC 632. Issues in Rhetorical Theory 3.00

WRTC 640. Proposal & Grant Writing 3.00

WRTC 644. Discourses of Health and Medicine 3.00

WRTC 648. Rhetoric of Science Technology 3.00

WRTC 652. Communicating Science 3.00

WRTC 655. Electronic Graphic Design 3.00

WRTC 664. Critical Perspectives On Digital Cultures 3.00

WRTC 668. Interfaces and Design 3.00

WRTC 680. Readings in Technical and Scientific Communication 3.00

Total: 33 Credit Hours

Writing, Rhetoric, and Technical Communication, M.S.

Capstone

Degree candidates have two options for satisfying the capstone requirement for the master's degree:

- Complete a research-based master's thesis on a relevant topic.
- Complete a 300-hour internship with an external client on a relevant topic.

It is important that the student understand that he/she is solely responsible for the success of the thesis/internship. The student needs to be in charge of completing all paperwork for the school, The Graduate School, registrar, etc., and for meeting all deadlines to matriculate successfully. The student will need to contact these offices well ahead of the semester in which he/she plans to graduate to ensure that all deadlines can and will be met.

Comprehensive Exam

All students must pass a comprehensive exam in the form of a defense of their capstone project.

Course Requirements

Core: 9 Credit Hours

WRTC 500. Critical Questions in Writing, Rhetoric and Technical Communication 3.00

WRTC 504. Professional Editing in Writing, Rhetoric and Technical Communication 3.00

WRTC 508. Research Methods in Writing, Rhetoric and Technical Communication 3.00

Thesis or Internship: 6 Credit Hours

WRTC 700. Thesis 3.00 - 6.00 or WRTC 701. Internship 3.00 - 6.00

Educational Technologies cognates: 9 Credit Hours

LTLE 570. Design and Development of Digital Media 3.00

LTLE 610. Principles of Instructional Design 3.00

LTLE 622. Professional Development in Educational Technology 3.00

At least three WRTC or other approved electives: 9 Credit Hours

WRTC 550. Organizational Communication 3.00

WRTC 595. Special Topics in Writing, Rhetoric and Technical Communication 3.00

WRTC 604. Ethics in Communication 3.00

WRTC 608. Intercultural Literacies 3.00

WRTC 610. Publication Management 3.00

WRTC 612. Teaching Writing 3.00

WRTC 624. Public Work of Rhetoric 3.00

WRTC 628. Genre in Action 3.00

WRTC 630. Legal Writing 3.00

WRTC 632. Issues in Rhetorical Theory 3.00

WRTC 640. Proposal & Grant Writing 3.00

WRTC 644. Discourses of Health and Medicine 3.00

WRTC 648. Rhetoric of Science Technology 3.00

WRTC 652. Communicating Science 3.00

WRTC 655. Electronic Graphic Design 3.00

WRTC 664. Critical Perspectives On Digital Cultures 3.00

WRTC 668. Interfaces and Design 3.00

WRTC 680. Readings in Technical and Scientific Communication 3.00

Total: 33 Credit Hours

Autism Spectrum Disorders Certificate

This certificate is designed to enable those in the field to increase their knowledge and understanding of students with a disability on the autism spectrum. The courses will engage participants in the practice of assessing, planning and implementing programming for this population. A course sequence has been developed to provide solid practice recommendations for this quickly growing need in the area of special education. Planning for the certificate programs has been based on competencies compiled by a committee of Virginia statewide stakeholders with a variety of backgrounds and perspectives. This is not an endorsement in Virginia.

College Student Personnel Administration Certificate

The certificate program in College Student Personnel Administration (CSPA) is designed as a professional development series for professionals working in student affairs on a college campus. It is a twelve credit-hour program comprised of courses that address the core knowledge, theories and philosophical foundations of the student affairs profession. Student affairs professionals who have completed a master's degree in a discipline outside of CSPA are admitted to this program and introduced to the specialized knowledge and practice inherent in the profession. The certificate program is comprised of courses in college student development, student personnel services, professional issues in student services, and an approved elective in the area of either management or counseling/student development (based upon the student's previous training). All classes are taught in a traditional classroom setting. No online options are available.

Students must complete four courses 12 credit hours as shown below:

PSYC 645. Student Personnel Services 3.00

PSYC 646. The American College Student 3.00

PSYC 649. Multiculturalism, Diversity and Difference: Theory, Research and Practice in Student Affairs 3.00

An approved elective

Computer Science Certificates

The MS/Computer Science program offers several certificate programs that provide working professionals and students from other disciplines a chance to learn in-depth about a specific topic without completing the entire MS curriculum. These programs are available to all JMU graduate students and to the public in general through Outreach and Engagement office. Course credit earned through these certificate programs can also be used towards earning an MS degree later. These certificate programs are available on campus only.

Prerequisites for the certificate programs generally include a baccalaureate degree and working knowledge of computer systems. See the specific program listings for details. Though multiple certificates may be earned, no more than one course may be used toward multiple certificates.

Certificate in Network/Information Security

This certificate will provide a practical understanding of computer security and techniques for defending computer networks.

Prerequisites

- Baccalaureate degree
- Two years of programming education or experience
- Working knowledge of Java or C++

Required Courses

CS 550. Operating Systems 3.00

CS 557. Information Security 3.00

CS 610. Networking and Security 3.00

Total: 9 Credit Hours

Certificate in Secure Computer and Database Systems

This certificate will provide an understanding of computer system and database operations and related security problems and solutions.

Prerequisites:

- Baccalaureate degree
- Two years of programming education or experience
- Working knowledge of Java or C++

Required Courses

CS 550. Operating Systems 3.00

CS 557. Information Security 3.00

CS 574. Database Systems 3.00

Total: 9 Credit Hours

Cyber Intelligence Graduate Certificate

This online graduate certificate includes analytical courses focusing on cyber intelligence, which involves tactical and strategic analysis of cyber security threats (e.g., data breaches) and adversaries (e.g., cyber security criminals and nation state groups) to support decision making. Students enhance their critical thinking, problem solving, networking and analytical skills as they explore, categorize and assess threats and adversaries in the cyber domain.

They gain knowledge through the application of tools and methodologies to identify, analyze and assess cyber security trends, cyber adversaries' tactics, techniques and procedures (TTPs) and their implications for decision-making. Students enhance their cyber hygiene (cyber security awareness), ethical, social media analytic and policy competencies as they prepare to get specialized analytical positions in the cyber security industry. This certificate provides opportunities for persons with an undergraduate degree (e.g., marketing, healthcare, psychology, intelligence analysis, or education) to expand their competencies so they can pursue analytical-oriented cyber positions. Positions include but are not limited to cyber intelligence specialist, cyber threat analyst, cyber security educator and new positions such as hybrid cyber specialists (e.g., marketing cyber specialists, healthcare cyber analysts).

Required Courses

IA 600. Introduction to Cyber Intelligence: Analysis of Cyber Threats 3.00

IA 603. Analytical Methodologies and Tools for Cyber Threats 3.00

IA 605. Networking and Cyber Threats 3.00

IA 610. Ethical, Legal and Policy Issues in Cyber 3.00

IA 615. Social Media and Big Data for Global Security 3.00

Choose one of the following:

IA 620. Advanced Cyber Intelligence 3.00

IA 621. Financial Crimes in Cyber Space 3.00

Total: 18 Credit Hours

Educational Leadership Certificate

Candidates who already have a master's degree and seek to add the Virginia Endorsement as a school administrator to a teaching certificate, may apply through the JMU Outreach and Engagement for the Educational Leadership certificate. Additionally, candidates must secure a passing score on the SLLA, Virginia's administrative licensure examination, to gain the administrative licensure from the DOE.

Admission Criteria

The master's degree and certificate programs in educational leadership are designed for practicing school personnel who aspire to be educational leaders.

Refer to the JMU Outreach and Engagement website for additional information.

Required Courses

EDUC 641. Learning Theories and Practice *3.00*

ADSU 540. Technology for Administrators *3.00*

ADSU 640. The Fundamentals of Educational Administration *3.00*

ADSU 641. School Law *3.00*

ADSU 642. Leadership for School-Community Relations *3.00*

ADSU 643. The Principalship *3.00*

ADSU 644. Supervision and Development of Personnel *3.00*

ADSU 652. School Finance and Business Management *3.00*

ADSU 668. Internship for Principals *3.00* or ADSU 678. Full-Time Internship for School Administrators *3.00*

Educational Technology Leadership Certificate

Candidates who do not desire a master's degree may enter one of the certificate programs. Certificate areas are Educational Technology, Educational Technology Leadership and eLearning.

Certificate Requirements (12 hrs)

LTLE 560. Foundations of Educational Technology *3.00*

LTLE 565. Educational Technology Management *3.00*

LTLE 570. Design and Development of Digital Media *3.00*

LTLE 622. Professional Development in Educational Technology *3.00*

Gifted Education Program (not currently accepting students)

The Gifted Education program is designed to enable students to add the Virginia K-12 Gifted Education Endorsement to an existing approved initial license in education.

Required Courses

EXED 560. The Nature and Needs of Gifted Learners *3.00*

EXED 565. Instructional Methods in Gifted Education *3.00*

EXED 660. Curriculum Design in Gifted Education *3.00*

EXED 665. Trends and Issues in Gifted Education *3.00*

EXED 570. Practicum in Gifted Education *3.00*

Total: 15 Credit Hours

Higher Education Assessment Specialist Graduate Certificate

This online certificate program provides the most up-to-date information about assessment practice in higher education, and assists students in developing skills to apply that knowledge at their own institutions. The program offers professional development and certification for assessment practitioners at institutions of higher education. All course work is delivered online. Students must complete four courses (12 credit hours).

Required Courses

PSYC 501. Workshop in Psychology *1.00 - 3.00* (Public Policy Related to Assessment in Higher Education)

PSYC 501. Workshop in Psychology (Foundations of Measurement and Assessment Design)

PSYC 601. Special Topics in Psychology *1.00 - 3.00* (Instrument Design for Higher Education Assessment)

PSYC 601. Special Topics in Psychology (Assessment Consultation in Higher Education)

Total: 12 Credit Hours

Public Administration, Management in International Nongovernmental Organizations Certificate

Globalization has prompted a rapid expansion in the number of international non-governmental organizations (NGOs) committed to economic development, relief, environmental issues, human rights and the advocacy of a variety of political and social causes. This growth creates employment opportunities for students trained in a variety of fields including social work, health sciences, business, political science, international affairs, education and applied technologies. Those attracted to employment in international NGOs have seldom had exposure to their distinctive work environments or training in the management of such organizations. In particular, students tend to be trained in job-specific and transferable skills in courses that assume work is conducted within the United States.

The Certificate in the Management of International Non-Governmental Organizations, an innovative and intensive course of study, offers students the opportunity to examine how international NGOs are affected by changes in the operating context. Over the course of this program, students will become more familiar with the distinctive features of these organizations, their managerial challenges, their social and political environments, their economic dynamics and the values they seek to realize.

An intensive summer curriculum involves students in a case-based pedagogy requiring them to apply various principles in scenarios central to international non-governmental management. This focused program of 40 weekly contact hours delivers 12 credit hours of instruction in four weeks during JMU's first four-week summer session (mid-May to mid-June). This will be followed by a six-credit internship with an international non-governmental organization, thus generating an 18-credit certificate delivered entirely over the summer. Internships are conducted from mid-June through mid-August and require 300 hours of work. Prior to the summer, the internship coordinator assists students with identifying internship opportunities and approves proposed internships. Because internships may not be available in Harrisonburg, students must be prepared to move to cities elsewhere in the U.S. and abroad to do the internship. Approved internships may be paid or unpaid. The NGO internship combines experiential learning with directed readings and research in which students explore issues from the earlier four courses in more detail and in a manner relevant to the nature of the internship. The internship is not required of students presently employed or recently employed by an international NGO in a substantive position.

Requirements

PUAD 650. Management in International Nongovernmental Organizations *3.00*

PUAD 651. Economics of the International Non-Profit Sector *3.00*

PUAD 652. Politics of International NGOs *3.00*

PUAD 653. Ethics and International NGOs *3.00*

PUAD 697. Internship in NGO Management *6.00*

Total: 18 Credit Hours

Accounting

ACTG 594. Business Practicum for Accountants. 1.00-3.00.

Through the Accounting Internship Program, students engage in a supervised work experience in public accounting, industry, not-for-profit organizations or government. During this time, students gain insight into the real world that will enhance their understanding in subsequent accounting coursework. It is the expectation that students taking 594 will have significant accounting classes to complete when they return to JMU from the internship. Prerequisite: Admission to MSA program.

ACTG 625. Tax Research and Strategy. 3.00

Provides the student with a working knowledge of tax research methodology and the technology utilized by tax professionals. Case-based to provide experience in dealing with unstructured situations encountered in professional tax practice. Both problem identification and resolution are emphasized. Because this is a capstone course, a grade of "B" or better is required in this course for successful completion of the M.S.A. program with a tax concentration. Prerequisite: Master of Science student or permission of instructor.

ACTG 627. Advanced Taxation of Business Entities I. 3.00

Examines the entity and owner tax consequences of forming, operating, liquidating and distributing profits from sole proprietorships, C Corporations, Partnerships and S Corporations. Prerequisite: Master of Science student or permission of the instructor.

ACTG 628. Advanced Taxation of Business Entities II 1.00-3.00

This course covers advanced topics in federal income taxation of corporations including mergers and acquisitions, consolidated tax returns, and accounting for income taxes. Prerequisite: ACTG 627 or permission of the instructor.

ACTG 629. Selected Topics in Taxation 1.00 - 3.00

Seminar on tax topics of current interest in specialized areas. Topics may include international taxation, deferred compensation, problems of closely-held businesses, estate planning and taxation of trusts, and new developments. May be repeated to a maximum of six credit hours for different topic areas. Prerequisite: Master of Science student or permission of instructor.

ACTG 630. Seminar in Financial Planning 1.00 - 3.00

Designed to develop a fundamental knowledge of personal finance, including goal setting, cash management, credit, insurance, taxes, housing, investment alternatives and employee benefits. Prerequisite: Master of Science student or permission of the instructor.

ACTG 640. Accounting Information Technology and Research. 3.00

In-depth coverage of modern technology used in the accumulation, reporting and analysis of accounting data. This course covers modern computing hardware, telecommunications, networking and intermediate systems design concepts. Prerequisite: Master of Science student or permission of the instructor.

ACTG 645. Advanced Accounting and Reporting 1.00-3.00

Study of the current theory and practice of financial reporting as it relates to business combinations and consolidations among commercial enterprises and the financial reporting of private not-for-profit organizations. Prerequisite: Master of Science student or permission of the instructor.

ACTG 675. Accounting Theory. 3.00

Study of selected areas in accounting theory, practice, and methodology, requiring integration and synthesis of student's accounting knowledge. Because this is the capstone course, a grade of "B" or better is required for this course for successful completion of the M.S.A. program. Prerequisite: Master of Science student or permission of the instructor.

ACTG 677. Advanced Assurance Theory and Data Analysis. 3.00

Students will develop a deeper understanding of auditing and assurance topics and the skills necessary to become leaders in the profession. Professional standards and underlying theory will be reviewed. Students will apply their knowledge to acquire hands-on experiences and perform data analysis. Prerequisite: Master of Science student or permission of the instructor.

ACTG 678. Governmental Accounting and Reporting 1.00-3.00

Study of the current theory and practice of budgeting, financial reporting and auditing of governments, including federal, state and local governments and government-owned entities. Prerequisite: Master of Science student or permission of instructor.

ACTG 680. Directed Readings 1.00 - 3.00

Study of auditing and assurance topics from both a professional and research perspective. Students will have opportunities to develop various ideas and skills necessary to become leaders in the auditing and assurance services arena. Contemporary professional standards will be reviewed as well as the theories behind these standards.

ACTG 681. Directed Research 1.00 - 3.00

Opportunity for directed research in areas of special interest. Prerequisite: Permission of instructor and program director.

ACTG 690. Information Security and Control. 3.00

A hybrid course (involving both classroom and on-line instruction) covering the fundamentals of information security. The course addresses the protection of confidentiality, integrity and availability of accounting data as it is collected, transported, stored, processed and reported. Special emphasis is placed on the relationship between information security and internal control. Prerequisite: Master of Science student or permission of the instructor.

ACTG 691. Computer Forensics for Accountants. 3.00

The use of computer software to aid in the prevention, deterrence, detection and investigation of fraud and other white-collar crimes. Topics include: the use of generalized audit software for data extraction and analysis; the use of spreadsheets and specialized software for fraud detection and analysis; and the use of the internet and other research tools. Prerequisite: Master of Science student or permission of the instructor.

ACTG 693. Financial Statement and Data Analysis. 3.00

Emphasizes becoming a fluent and investigative reader of financial reports by examining key areas of financial reporting and disclosure. Students extract, reformulate, adjust and analyze financial statement data from public company filings to evaluate varying dimensions of a company's historical financial performance, as well as forecast the company's future financial statements and estimate its value. Prerequisite: Master of Science student or permission of the instructor.

ACTG 695. Seminar in Accounting 1.00 - 3.00

Study of selected areas in accounting theory, practice and methodology. Prerequisite: Master of Science student or permission of the instructor.

ACTG 696. Tax Compliance 1.00 - 3.00

Involves preparation of federal and state income tax returns and other compliance related issues. The course may involve preparation of individual returns as part of the Voluntary Income Tax Assistance program. The program provides tax compliance services primarily for individuals who cannot afford professional tax services. Students who have completed

ACTG 492 may not take this course. Prerequisite: Master of Science student or permission of the instructor.

Adult Education/Human Resource Development

AHRD 520. Foundations of Adult Education/Human Resource Development. 3.00

Historical beginnings of adult education and human resource development programs are examined in order to understand current practices. Current issues and trends, research, legislation and publications will be incorporated into the course.

AHRD 540. Leadership and Facilitation. 3.00

This course examines the multi-faceted concept of leadership and facilitation, focusing on facilitative leadership approaches and how these contribute to organizational and individual performance. Traditional and emergent paradigms will be explored. Emphasis will be placed on knowledge, attitudes and skills that enable a facilitator to work effectively with diverse work groups, enhance creativity and draw from organizational and community resources.

AHRD 550. Human Resource Work Experience. 3.00

This independent study course provides on the job experience in a human resources department or setting. Students gain experience in all phases of human resource development, including needs assessment, research, instructional design, materials and workshop development, facilitation and evaluation.

AHRD 570. Diversity and Ethics in AHRD. 3.00

This course focuses on two of the critical areas, diversity and ethics, in AHRD. It examines and explores theories and techniques for dealing with institutional "isms" (e.g., multiculturalism, sexism, ageism and professionalism, etc.), as they relate to managing training, conflict resolution, career development, mentoring, performance improvement, team building and peer rating methods. Prerequisite: AHRD 520.

AHRD 575. Diversity and Ethics in AHRD. 3.00

This course examines diversity and ethics in AHRD from theoretical, historical and legal perspectives and provides students with grounding in a number of timely and relevant diversity topics (inequality, cultural and global competence, privilege and power, disabilities, multiculturalism, sexism, ageism, and professionalism) as they relate to designing, delivering and managing diversity training program. Prerequisite: AHRD 520.

AHRD 580. Learning in Adulthood. 3.00

This course provides a comprehensive overview of learning in adulthood. Emphasis is placed on learning contexts, what and why adults learn, the nature of learning, learning theories, adult development and the development of adult learning theory. Ways and means to enhance learning opportunities in the lives of adults at work, school, worship, in leisure and for better health are explored.

AHRD 600. Performance Analysis and Needs Assessment in Adult Education/Human Resource Development. 3.00

Focuses on knowledge and skills basic to organization, process, and task analyses, including approaches and steps in identifying root causes of performance problems. Current performance analysis practices in AHRD will be discussed. Methods and techniques in developing specific instruments for performance improvement data collection and data analysis will also be covered. Prerequisite: AHRD 520.

AHRD 615. Needs Assessment and Program Evaluation in Adult Education/Human Resource Development. 3.00

Focuses on knowledge, skills and procedures required to analyze performance problems at the organizational, process and task level. Examines theories and practices in evaluation and measurement of AHRD programs from the perspective of impact on organizations, work processes and individuals, as well as follow-up decisions. Covers data collection methods and techniques used to collect performance improvement data, conduct evaluations and analyze data. Current performance analysis and evaluation practices in AHRD will be discussed. Prerequisite: AHRD 520.

AHRD 620. Consulting in AHRD. 3.00

This course focuses on models, techniques and practices of consulting skills in developing programs for learners as individuals, groups and organizations. Emphasis is placed on performance analysis, needs assessment, instructional design processes, approaches and practices, implementation procedures and evaluation approaches to various learning settings and clients. Prerequisite: AHRD 520, AHRD 600, LTLE 610 or equivalent, or permission of the instructor.

AHRD 630. Research and Inquiry in Adult Education/Human Resource Development. 3.00

This course provides students with knowledge and skills in research and inquiry. This course will focus on different qualitative and quantitative research methods, research designs, approaches to doing literature reviews and analyses, and determining the size and scope of research projects. Data collection instruments and analyses approaches will also be covered. Prerequisite: AHRD 520 or students in the stage of conducting R&R projects.

AHRD 635. Organization and Administration of Adult Education/Human Resource Development Programs. 3.00

This course examines current and proposed legislation, program development and organizational structures found in adult education and human resource development. Emphasis is placed on changing existing structures to lifelong learner-driven structures.

AHRD 640. Program Evaluation and Measurement in Adult Education/Human Resource Development. 3.00

Focuses on theories and practices in evaluation and measurement of AHRD programs from the perspective of impact on organizations, work processes and individuals, as well as follow-up decisions. Methods and processes in developing specific instruments for program evaluation data collection and data analysis will also be discussed. Prerequisite: AHRD 520.

AHRD 670. American Higher Education. 3.00

The objective and organization of prevalent types of institutions are studied. Current issues and problems in American higher education are explored.

AHRD 671. Teaching and Learning Processes in Higher Education. 3.00

Instructional practices and themes are studied in relationship to programs in higher education.

AHRD 680. Reading and Research. 3.00

Designed to provide the opportunity for supervised reading and research in a special interest area of adult education/human resource development. Prerequisite: Approval from program adviser and completion of a basic research course.

AHRD 690. Special Studies in Adult Education/Human Development. 3.00

Designed to provide learners the opportunity to explore topics of special interest that are more limited than the traditional three credit course. Prerequisite: Approval of major adviser.

AHRD 695. Portfolio. 0.00

The portfolio is a non-credit capstone course to demonstrate individual learning processes throughout the AHRD program. Students will construct their portfolios based on their professional and academic goals and experiences, from work completed in graduate courses. The portfolio will assist students, as professionals or advanced students, prove their expertise and academic preparation in the job market or in academia, and contribute to their comprehensive exam experience, allowing for reflection on the program and individual learning. Prerequisite: All core courses and/or concurrent with Reading and Research or Thesis Research.

AHRD 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

AHRD 699. Thesis Continuance. 2.00

Continued study, research and writing in the areas of thesis concentration. Course may be repeated as needed.

AHRD 700. Thesis Research. 3.00 - 6.00

Continued study, research and writing in the areas of thesis concentration. Course may be repeated as needed. This course is graded on a satisfactory/unsatisfactory/ incomplete (S/U/I) basis. Prerequisite: EDUC 630 and approval of graduate adviser.

Athletic Training Education Program

ATEP 511. Foundation of Athletic Training. 3.00

This course serves as a foundation for professional development as an Athletic Trainer. Students will be introduced to health informatics, professional practice parameters, and injury prevention strategies. Students will develop basic skills necessary to begin clinical education experiences (i.e. taping, wrapping, bracing, cryotherapy, thermotherapy).

ATEP 512. Emergency Management of Injuries & Illnesses. 4.00

This course is designed for athletic training students to meet the educational competencies for national accreditation in the following areas: development of risk management/emergency action plans, primary assessment of athletic injuries, emergency care of athletic injuries, immediate care of spine injuries, prevention of injuries associated with the physically active, utilization of diagnostic tools, and an overall understanding of protective equipment.

ATEP 513. Clinical Applications of Human Gross Anatomy. 4.00

This course is an advanced study of human anatomy using cadaver dissection. Emphasis is given to musculoskeletal and trunk anatomy. Clinically relevant musculoskeletal anatomy and pathology will be taught in conjunction with etiology for injuries and illnesses commonly seen by athletic trainers. This course is designed to provide a strong clinical foundation for the developing practitioner.

ATEP 521. Clinical I: Psychosocial Concepts and Cultural Sensitivity. 3.00

This course integrates didactic and clinical education. Classroom emphasis will examine psychosocial components of injury, mental health situations, diverse populations, cultural traditions and norms that athletic trainers may face in professional practice. Basic screening, intervention and counseling techniques, and referral skills will be taught to manage psychosocial and mental health concerns. The clinical education will involve opportunities for application of skills in a supervised clinical environment.

ATEP 524. General Medicine for the Athletic Trainer Part I. 3.00

This course is the first in a series of two courses designed to educate athletic training students on common medical conditions encountered in the physically active population. Emphasis will be placed on identification and management of these conditions including emphasis on the pharmacologic management, impact on performance, and development of physical examination.

ATEP 525. Lower Extremity Orthopedic Examination. 4.00

This course develops foundational examination and critical thinking skill necessary for an athletic trainer to appropriately assess a patient. Students will learn the examination process, how to perform a secondary survey, and how to perform lower extremity orthopedic evaluation skills. In this course, students will learn and practice evaluation techniques in a supervised setting in order to develop entry-level practical skills.

ATEP 526. Therapeutic Interventions I. 4.00

This course examines the body's response to injury and the subsequent phases of healing. Specific focus will be given to interventions that address the acute and sub-acute phases of healing to control pain, decrease swelling and edema, promote early movement, and address soft tissue restrictions. The student will develop decision-making skills in the selection and application of therapeutic interventions.

ATEP 532. Clinical II: Nutrition & Exercise. 3.00

This course integrates didactic and clinical education. Classroom emphasis will be placed on the nutrition and exercise concepts that promote wellness in populations who are physically active or healing. The clinical education will involve opportunities for application of skills in a supervised clinical environment.

ATEP 534. General Medicine for the Athletic Trainer Part II. 3.00

This is the second course in a series of two courses designed to educate athletic training students on common medical conditions encountered in the physically active population. Emphasis will be placed on identification and management of these conditions including emphasis on the pharmacologic management, impact on performance, and development of physical examination and clinical problem solving skills.

ATEP 535. Upper Extremity Orthopedic Examination. 4.00

This course develops foundational examination and critical thinking skill necessary for an athletic trainer to appropriately assess a patient. Students will build their examination technique skillset by applying them to the upper quarter of the body specifically learning to evaluate the upper extremity, head/face, neck, and thorax. Examination of musculoskeletal, fascial, thoracic, and traumatic head injuries will be completed. In this course, you will learn and practice evaluation techniques in a supervised setting in order to develop entry-level practical skills.

ATEP 536. Therapeutic Interventions II. 4.00

This course will develop the student's ability to design rehabilitation and reconditioning programs. Focus on anatomy, physiology, biomechanics, various exercises, use of available equipment, and the understanding of moral and ethical obligations will advance the student's ability to use therapeutic exercise as an intervention. The goal of this course is to present the student with a theoretical and practical approach for the design of rehabilitation protocols and the safe use of rehabilitation equipment for use with lower extremity musculoskeletal injuries.

ATEP 537. Evidence Based Practice in Athletic Training. 3.00

This is the first course in a series of two focused on developing clinical EBP skills that will be applied toward a master's/capstone project. This course will develop clinical problem solving skills assisted by the application of the medical and research literature. These skills help the practicing healthcare professional develop an understanding of current knowledge gaps, how to effectively frame inquiries, how to seek and find quality resources, critically assesses those resources and how to apply evidence to daily patient care. The concept of clinical problem solving and teamwork will be emphasized.

ATEP 645. Hip, Pelvis and Spine Orthopedic Examination and Rehabilitation. 3.00

This course will develop a comprehensive approach to the assessment and therapeutic intervention of musculoskeletal injuries to the hip, pelvis, spine, and torso. Students will learn to apply examination techniques, analyze findings, and synthesize information to develop an appropriate management strategy including therapeutic interventions. Further emphasis will include: the use of posture evaluations, analysis of dysfunctional movement patterns, utilization of clinical outcome measures, assessment of the kinetic chain, and making appropriate referral decisions. Students will identify and instruct appropriate therapeutic intervention techniques to aid in rehabilitation of these areas.

ATEP 646. Therapeutic Interventions III. 3.00

This course will develop the student's ability to develop rehabilitation and reconditioning programs. Focus on anatomy, physiology, biomechanics, various exercises, use of available equipment, and the acceptance of moral and ethical obligations will advance the student's ability to intervene with therapeutic exercise. The goal of this course is to present the student with a theoretical and practical approach for the design of rehabilitation protocols and the safe use of rehabilitation equipment for use with upper extremity musculoskeletal injuries.

ATEP 653. Clinical III: Professional Development 1. 0.00-11.00

This course integrates didactic and clinical education. Classroom emphasis will be placed on professional development and administrative skills. The clinical education will involve opportunities for application of skills in a supervised clinical environment. This is a clinical intensive experience that immerses the student into the clinical environment in a near full-time capacity.

ATEP 657. Applications in Evidence Based Practice. 3.00

This course is the second in a series of two courses designed to provide the athletic training student with skills to understand research design, analyze research information and apply it to clinical practice. The student will use the skills acquired in the first class and throughout clinical practice to identify a clinical question and develop a project to answer that question. The identified question may address a wide range of clinical or professional practice issues. This query will be implemented to produce a capstone project in the form of a paper and/or presentation that will represent graduate student quality work.

ATEP 660. Administration in Athletic Training. 3.00

This course will provide students with an overview of management skills necessary to provide quality management skills necessary to maintain an environment for quality healthcare. These skills include program planning and analysis, personnel management, legal concepts, budgeting, purchasing, facility design, insurance, and the organizational structure of governing bodies.

ATEP 664. Clinical IV: Transition to Practice. 8.00

This course integrates didactic and clinical education. Classroom emphasis will be placed on interprofessional and transition to practice concepts. The clinical education will involve opportunities for application of skills in a supervised clinical environment. This is a clinical intensive experience that immerses the student into the clinical environment in a near full-time capacity.

Art

ART 501. Workshop in Art 1.00 - 3.00

Workshops, accompanied by lecture and discussion periods, selected from such areas as painting, sculpture, printmaking, ceramics, art education, photography and crafts. In studio workshops, 30 contact hours will be required for each credit hour.

ART 560. Advanced Photography: Alternative Processes 1.00 - 3.00

Advanced study in photography focusing on Alternative Processes and experimental approaches including non-silver 19th Century techniques, Polaroid, and liquid emulsion, among others.

ART 562. Advanced Photography. 3.00

An exploration of the culture and trends leading to the invention of photography, facilitating the formation of concepts and objects which create wonder.

ART 564. Advanced Photography: the Photograph as a Document. 3.00

An exploration of technical, conceptual and theoretical approaches to making documentary-based photographic work using film, digital or video cameras.

ART 566. Advanced Photography: Performance for the Lens. 3.00

An exploration of technical, conceptual and theoretical approaches to making, staging and directing performance-based photographic work using film, digital or video cameras.

ART 568. Advanced Photography: Screen-Based Photo/Video. 3.00

An exploration of technical, conceptual and theoretical approaches to making screen-based photographic projects culminating in a fully developed online presentation.

ART 590. Topics in Art. 3.00

Study of selected topics in art and art history. May be repeated when course content changes. See MyMadison for current topics. *Prerequisite: Admission into a School of Art and Art History graduate program and permission of instructor.*

ART 593. Contemporary Art Theory. 3.00

This is a reading, research and discussion seminar designed for upper-level studio art majors addressing historic and contemporary issues surrounding vision, the senses and aesthetics in the theory and practice of art. *Prerequisite: Admission into a School of Art and Art History graduate program.*

ART 595. Internship in Art 1.00 - 6.00

Individual internship programs may be pursued in a variety of art-related areas which would parallel the education and career needs of each student. Each internship will be a full-time work/study program which will expose the student to the agency's organization and operation. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ART 600. Graduate Integrative Seminar. 3.00

A required seminar involving the entire graduate cohort, years one through three. The seminar functions as a collective discussion of contemporary issues in culture and the arts. The course integrates the information addressed in academic classes, individual studio practice and field trips and with visiting artists. Progression of individual research and practice functions as a weekly forum for critical conversations. Content will interface with student's individual practice. Can be taken a maximum of six times for 18 credits. *Prerequisite: Admission into a School of Art, Design and Art History graduate program.*

ART 601. Graduate Studio Practice. 3.00

This is a required interdisciplinary studio-based course offered each semester years one through three. The course consists of independent research and artistic production in consultation and under the supervision of the core graduate studio faculty. Can be taken a maximum of six times for 18 credits. *Prerequisite: Admission into either the M.F.A. or M.A. in art graduate degree programs in the School of Art, Design and Art History.*

ART 602. Contextual Practice. 3.00

A summer course that furthers student-initiated projects and creative research. The course is intended to advance the student's ability to identify, research, engage with and respond to organizations, sites or audiences that expand the student's field of artistic discourse. The course seeks to develop a student's ability to engage in relationships beyond the traditional confines of the contemporary art world; however, the course should also result in new personal studio production that reflects the impact of the creative research/dialogue being conducted. To be taken a maximum of two times for a total of six credits. *Prerequisite: Admission into either the M.F.A. or M.A. in art graduate degree programs in the School of Art, Design and Art History and six credits of ART 601.*

ART 683. Criticism of Art. 3.00

An overview of major art theories, both as philosophy and style analysis, for the purpose of investigating the functions and practice of art criticism. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ART 690. Reading and Research 1.00 - 3.00

Directed reading and research in art areas of special concern to the student. Usually the topics will deal with art history, art theory or philosophical aesthetics. *Prerequisite: Two graduate-level art history courses and permission of instructor.*

ART 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

ART 699. Thesis Continuance. 2.00.

Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

ART 700. Thesis Research. 3.00

This course is graded on a satisfactory/unsatisfactory (S/U) basis.

Art Education

ARED 518. Contemporary Issues in Art Education. 3.00

An investigation of contemporary issues and trends in education and art education and their impact on our schools, including state mandates, arts education associations on the state and national level, funding agencies and technology. *Prerequisite: Art teaching license.*

ARED 590. Topics in Art Education. 3.00

Graduate seminar presenting special topics in art education. Course may be repeated when course content changes. See MyMadison for current topics. *Prerequisite: Admission to School of Art, Design and Art History graduate program and permission of instructor.*

ARED 610. Studio Experiences in the Schools. 3.00

A course designed for the art teacher to explore, investigate and produce artwork in media or approaches unfamiliar to the teacher. Emphasis will be placed on acquiring skills and knowledge with respect to materials and processes of specific media, as well as their direct application to students in a school setting. *Prerequisite: Art teaching license.*

ARED 682. Research Methods for Educational Settings. 3.00

Research methods that can be used to study aspects of art education and general education are explored. Research proposals developed during this course will reflect a range of contemporary issues and practices unique to the field of art education. *Prerequisite: Prerequisite: Art teaching license.*

ARED 683. Criticism of Art. 3.00

An overview of major art theories, both as philosophy and style analysis, for the purpose of investigating the functions and practice of art criticism. *Prerequisite: Admission into a School of Art, Design and Art History graduate program.*

ARED 700. Thesis Research 1.00 – 6.00

This course is graded on a satisfactory/unsatisfactory (S/U) basis.

Art History

ARTH 506. Monticello. 3.00

Seminar on the architecture and material culture of Thomas Jefferson's Monticello. The course will examine the design and construction of the house, its decorative arts, mechanical devices, landscape and garden design, Mulberry Row, the Monticello joinery, and the Indian Hall. Field trips to Monticello are required. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 508. The Museum: History and Controversies. 3.00

This advanced graduate 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. Course work centers on a substantial research paper based on primary source materials. Required field trips. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 519. Topics in African Art. 3.00

Advanced topics in African Art will deal with 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. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 530. Far Eastern Art. 3.00

A survey of East Asian art from prehistoric times to 19th century colonialism. Emphasis is placed on the areas of major production: India, China, Japan, with less attention to such centers as Cambodia, Siam and Korea. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 539. Topics in Medieval Art. 3.00

Topics in Medieval Art may include the study of major buildings and artistic monuments in the medieval Mediterranean and in Western Europe, art in service of empire building, medieval audiences and modes of reception, and the afterlives of monuments into the contemporary period. Course work centers on a substantial research paper based on primary source materials. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 544. Gothic and Gothic Revival Architecture. 3.00

Advanced survey of Gothic architecture in France, England and Italy, 1150-1500, and its influence in England and America, 1750-1910. Examines the design of major cathedrals and regional European Gothic styles. Explores their influence upon Walpole, Pugin, Ruskin and other champions of Gothic Revival. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 546. Renaissance Art and the East. 3.00

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; city planning; portraiture; the exchange of luxury goods; and the use of art as a diplomatic tool. Substantial research paper required. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 548. Studies in Leonardo and Michelangelo. 3.00

Seminar which 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 the artwork, and inter-relationships between the artist's visual and literary works. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 566. Art and Nationalism. 3.00

This advanced graduate seminar examines the intersection between art and nationalism from the late-eighteenth century to the present. Topics may include propaganda, monuments, and the construction of national memory. Particular attention will be devoted to the shifting nature of commemorative practice throughout the modern period. Course work centers on a substantial research paper based on primary source materials. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 569. Topics in Nineteenth Century Art. 3.00

Topics in Nineteenth Century Art may include studies of major artists, such as Caspar David Friedrich or Edouard Manet, specific artists groups like the Pre-Raphaelite brotherhood, or thematic issues such as the relationship between art and nationalism. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 571. Commemoration and Controversy: A History of Public Art in America. 3.00

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. Substantial research paper required. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 572. Modern Art Since 1945. 3.00

A study of the many developments and trends in American art since 1945. This course will focus on major American movements and artists since World War II, with an emphasis on understanding the theoretical basis of those movements and the development of the art market during this period. Seminar format. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 579. Topics in Modern Art. 3.00

This advanced graduate seminar may include studies of modern and contemporary painters (i.e., Gerhard Richter), sculptors (i.e., Kiki Smith), performance and video artist (i.e., Bill Viola), or thematic issues such as the relationships between art, technology and gender/racial politics. Students are expected to do original research with primary sources.

Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.

ARTH 584. Art of the Americas. 3.00

Art of indigenous peoples in the Americas (Meso, Central, South and/or North America) 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. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 586. Monticello. 3.00

Seminar on the architecture and material culture of Thomas Jefferson's Monticello. The course will examine the design and construction of the house, its decorative arts, mechanical devices, landscape and garden design, Mulberry Row, the Monticello joinery, and the Indian Hall. Field trips to Monticello are required. *Prerequisite: Permission of instructor.*

ARTH 589. Topics in American Art History. 3.00

Topics in American art may include studies of major artists such as Thomas Cole, George Catlin or Thomas Eakins, a specific group like the Hudson River School, or thematic issues such as art produced in a colonial context, sentimentalism in American genre painting or representations of the American west in art. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 590. Topics in Art History. 3.00

Study of selected topics in art and art history. May be repeated when course content changes. See MyMadison for current topics. *Prerequisite: Admission into a School of Art, Design and Art History graduate program and permission of instructor.*

ARTH 595. Internship in Art History 1.00 - 6.00

Individual internship programs may be pursued in a variety of art-related areas which would parallel the education and career needs of each student. Each internship will be a full-time work/study program which will expose the student to the agency's organization and operation. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 670. Contemporary Visual Culture and Critical Theory. 3.00

This course will focus on the variety of critical methodologies used to analyze contemporary visual culture. We will, for example, investigate deconstruction, feminist criticism, semiotics, Foucault's structures of power, all within the context of contemporary European and American cultural politics. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 678. Seminar in American Art. 3.00

An intensive reading colloquium focused on selected topics, interpretations, historiography or methods in American art scholarship from the Colonial period to 1945. Issues and readings will change each semester that the course is offered. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 683. Criticism of Art. 3.00

An overview of major art theories, both as philosophy and style analysis, for the purpose of investigating the functions and practice of art criticism. *Prerequisite: Admission into a School of Art, Design and Art History graduate program.*

Biology

BIO 500. Geology & Ecology of the Bahamas.. 3.00

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: GEOL 110, GSCI 165 or 200 level GEOL or BIO course; at least 4 hours of additional lab science; and permission of the instructor. Credit may not be earned in both BIO 400 and BIO 500.*

BIO 501. Workshops in Biology 1.00 - 3.00

Concentrated study in particular areas of biology. No credit is allowed toward the Master of Science degree requirements and no more than one workshop may be applied toward a minor in biology.

BIO 502. Forest Ecology. 4.00.

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: BIO 124 or equivalent. Credit may not be earned in both BIO 402 and BIO 502.*

BIO 504. Evolution. 3.00

Population change as brought about by mechanisms of organic evolution. Molecular biology is integrated with evolutionary biology and concepts of phylogenetic relationships resulting from the process of speciation are stressed. A seminar/research project is required. *Prerequisite: BIO 224 or equivalent. Credit may not be earned in both BIO 404 and BIO 504.*

BIO 513. Human Gross Anatomy with Clinical Applications. 9.00

An advanced study of human anatomy with cadaver dissection. Emphasis is given to a clinical perspective and the evolution and development of human structure within a comparative context. *Prerequisite: A rigorous undergraduate course in anatomy, admission to the Physician Assistant program or permission of the instructor.*

BIO 514. Clinical Anatomy for Occupational Therapists. 4.00

This course offers an in-depth study of the structure of the musculoskeletal and peripheral nervous system of the human body. Specific structural and neural pathologies will be examined in regards to impact on occupational performance. Laboratory experiences involving cadaver dissection, skeletal material, models and audiovisual technology will be utilized. *Prerequisite: Admission to the occupational therapy program*

BIO 516. Pathophysiology for Physician Assistants I. 6.00

An advanced clinically-oriented study of human physiology and the alterations in body functions that underlie diseases in humans. It serves as a foundation for courses in clinical medicine. *Prerequisite: Admission to the physician assistant concentration.*

BIO 517. Pathophysiology for Physician Assistants II. 6.00

An advanced clinically-oriented study of human physiology and the alterations in body functions that underlie diseases in humans. It serves as a foundation for courses in the clinical medicine. *Prerequisite: Successful completion of all previous courses in the physician assistant concentration or permission of the program director.*

BIO 520. Medical Parasitology. 3.00

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. Additional assignments required for graduate students. *Prerequisite: BIO 214 or equivalent. Credit may not be earned in both BIO 420 and BIO 520.*

BIO 526. Graduate Topics in Biology. 3.00 - 4.00

Studies in special areas of biology. May be repeated with change in topic or change in subject matter within a topic.

BIO 532. Light Microscopy. 4.00

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: BIO 222, BIO 224 or equivalent. Credit may not be earned in both BIO 432 and BIO 532.*

BIO 540. Functional Neuroscience for Occupational Therapists. 3.00

This course will examine the functional performance of all aspects of the human nervous system. Specific nervous system conditions will be introduced and their impact on occupational performance, performance components and environmental contexts discussed. *Prerequisite: Admittance to the occupational therapy program and satisfactory completion of previous concentration work. Credit may not be applied to the biology major or minor.*

BIO 544. Virology. 3.00

A lecture seminar course considering the fundamental principles of basic and medical virology and an analysis of the structure, chemistry and replication of representative RNA and DNA animal viruses at the molecular level. *Prerequisite: BIO 214, BIO 224 or equivalent, a course in microbiology or genetics or consent of the instructor. Credit may not be earned in both BIO 444 and BIO 544.*

BIO 546. Experimental Neurobiology. 4.00

The experimental basis of neurobiology will be explored in invertebrates and humans using modern neurobiological techniques, such as 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: Credit may not be earned in both BIO 446 and BIO 546.*

BIO 547. Evolution and Ecology of Infectious Disease. 3.00

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: BIO 280, BIO 380 or equivalent. Credit may not be earned in both BIO 447 and BIO 547.*

BIO 548. Developmental Neurobiology. 4.00

Exploration of molecular and cellular mechanisms that determine neuronal identity, migration, synaptogenesis, synaptic plasticity and neural organization. Critical and intensive evaluation and oral communication of primary literature. Introduction to current research techniques in developmental neurobiology. *Prerequisite: Prerequisite for BIO 448: BIO 240 or BIO 250. Credit may not be earned in both BIO 448 and BIO 548.*

BIO 549. Insect Ecology. 4.00

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: BIO 124 or equivalent. Credit may not be earned in both BIO 449 and BIO 549.*

BIO 550. Neurobiology. 4.00

Molecular, cellular and network mechanisms underlying behavior will be studied using problem-solving, discussion, lecture and reading of 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: Credit may not be earned in both BIO 450 and BIO 550.*

BIO 551. Current Topics in Human Development and Evolution. 3.00

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.

BIO 552. Population Biology. 4.00

Theoretical and applied aspects of distribution and abundance, population regulation, interactions between populations and conservation will be studied in selected organisms, including humans. An independent research project will be required. *Prerequisite: BIO 124 or equivalent. Credit may not be earned in both BIO 452 and BIO 552.*

BIO 553. Microbial Ecology and Evolution.. 3.00

Advanced 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. *Prerequisite: Introductory ecology and microbiology. Credit may not be earned in both BIO 453 and BIO 553.*

BIO 554. Biometrics. 4.00.

The design of biological experiments and applications of statistical techniques in ecology, cell biology, physiology, behavior, systematics, genetics and evolution. Experiments and data from the biological literatures will be emphasized. Statistical software packages will be used. A seminar/research project involving advanced applications is required. *Prerequisite: MATH 220 or equivalent. Credit may not be earned in both BIO 454 and BIO 554.*

BIO 555. Plant Physiology. 4.00.

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. *Prerequisite: BIO 214 or equivalent. Credit may not be earned in both BIO 455 and BIO 555.*

BIO 557. Biological Applications of Geographic Information Systems. 4.00.

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. A seminar/research project involving advanced applications is required. No prior GIS experience is required. *Prerequisite: BIO 124 or equivalent. Credit may not be earned in BIO 457 and BIO 557.*

BIO 559. Aquatic Ecology. 4.00.

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. Preparation of seminar topic papers required. *Prerequisite: BIO 124, CHEM 131 and 132 or equivalents. Credit may not be earned in both BIO 459 and BIO 559.*

BIO 560. Plant Biotechnology. 4.00.

Theory and practice of growing isolated plant cells, tissues and organs. Independent research project and class seminar expected. *Prerequisite: General botany and chemistry. Credit may not be earned in both BIO 460 and BIO 560.*

BIO 568. Endocrinology. 3.00

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: BIO 370 or equivalent. Credit may not be earned in both BIO 468 and BIO 568.*

BIO 570. Morphology of Non-Vascular Plants. 4.00.

Comparative morphology, ecology and taxonomy of representative algae, fungi and bryophytes. *Prerequisite: BIO 124 or equivalent. Credit may not be earned in both BIO 470 and 570.*

BIO 575. Advanced Cell and Molecular Biology.. 3.00

This seminar-style course covers topics in advanced cell and molecular biology at the graduate level. Class format will be discussions from assigned review articles, followed by student-led presentations of assigned primary literature. Students write a research grant proposal and give an oral presentation of their proposal in class. *Prerequisite: BIO 224 or equivalent. Credit may not be earned in both BIO 475 and BIO 575.*

BIO 577. The Genetics of Cancer. 3.00

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: BIO 224 or equivalent. Credit may not be earned in both BIO 477 and BIO 577.*

BIO 580. Advanced Molecular Biology.. 4.00.

Cellular constituents and genetics are emphasized at the molecular level. *Prerequisite: BIO 224, CHEM 241 or equivalents. Credit may not be earned in both BIO 480 and BIO 580.*

BIO 581. Genomics.. 4.00.

This course examines the structure and function of genomes. Students will develop facility in web-based tools and resources and learn about the power and limitations of current resources and knowledge. The focus is on the biological questions that genomics can help to answer. Laboratory exercises will be sequencing and analyzing genomic DNA. *Prerequisite: BIO 224 or equivalent molecular biology/genetics course work. Credit may not be earned in both BIO 481 and BIO 581.*

BIO 582. Human Histology. 4.00.

This course presents the microscopic structure of cells, tissues and organs to explain normal physiological function and provides a basis for understanding disease mechanisms and altered cellular states. A special research project is required. *Prerequisite: BIO 270 or BIO 290, or equivalent. Credit may not be earned in both BIO 482 and BIO 582.*

BIO 583. Bioinformatics. 4.00.

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: BIO 224 or equivalent. Credit may not be earned in both BIO 483 and BIO 583.*

BIO 584. Comparative Endocrinology.. 3.00

This course will study the hormonal regulation of physiological activity in different animals, from the cellular to the whole-organism level. Special emphasis will be paid to recent advances in cellular and molecular endocrinology as well as human endocrine disorders. A special research project is required. *Prerequisite: BIO 270 or BIO 370, or equivalent.*

BIO 586. Systematics of Vascular Plants. 4.00.

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. An independent project and presentation will be required. *Prerequisite: General botany and cell biology or equivalents. Credit may not be earned in both BIO 486 and BIO 586.*

BIO 591. Mechanics of Animal Movement.. 4.00.

The interactions of organisms with their physical environment. Concepts from fluid and solid mechanics are applied to biological form and function.

BIO 600. Effective Teaching I. 2.00

Students will explore effective teaching strategies in the biological sciences. Emphasis will be placed on how to prepare and teach laboratory and lecture courses, including effective instructional technologies and exam preparation. Discussions of teaching experiences and mentor and peer evaluations of the students' teaching skills will be included. Corequisite: BIO 601

BIO 601. Mentored Teaching 1.00

Students continue their exploration of effective teaching strategies in the biological sciences as they enter into their first teaching assignment in the department. Students will work under a faculty teaching mentor who will guide the students through their first teaching experience in the Department of Biology. Emphasis will be placed on mentor and peer evaluations of the students' teaching skills. May be repeated for up to two credits for different teaching assignments. *Corequisite: BIO 600.*

BIO 602. Effective Scientific Communication. 2.00

Students will develop skills in effective oral and written communications in the biological sciences. Emphasis will be placed on student learning styles, how to prepare an effective lecture or research seminar, effective use of presentation technologies and effective scientific writing.

BIO 603. Scientific Presentations 1.00

A forum for students to present their research and/or teaching materials to their peers and receive constructive feedback on their progress. Presentations may take the form of informal "chalk talks," journal club presentations and/or formal presentations. This course is graded on a satisfactory/unsatisfactory (S/U) basis. May be repeated for up to two credits.

BIO 630. Advanced Graduate Topics in Cell, Molecular, and Developmental Biology 1.00 - 3.00

Studies in advanced special areas of biology. May be repeated with change in topic or change in subject matter within a topic.

BIO 660. Advanced Graduate Topics in Ecology, Evolution and Organismal Biology 1.00 - 3.00

Seminar in special areas of biology. May be repeated up to a total of 12 hours with change in subject matter.

BIO 697. Biological Research 1.00 - 6.00

Laboratory and/or field research will be conducted under the direction of the Graduate Advisory Committee. The course will emphasize the development of research techniques and data collection. Can be repeated for credit. This course is graded on the satisfactory/unsatisfactory (S/U) basis. Hours do not apply toward 30 hours required for graduation.

BIO 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed. A grade of "NC" (no credit) will be automatically entered for continuance hours. Hours do not apply toward 30 hours required for graduation.

BIO 699. Thesis Continuance 1.00

Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed. A grade of "NC" (no credit) will be automatically entered for continuance hours. Hours do not apply toward 30 hours required for graduation.

BIO 700. Thesis Research 1.00 - 6.00

Thesis research to be directed by the Graduate Advisory Committee. This course is graded on a satisfactory/unsatisfactory (S/U) basis. *Prerequisite: Unconditional admission status in the graduate program and completion of an approved thesis research proposal.*

Communication Sciences and Disorders

CSD 500. Research in Communication Sciences and Disorders. 2.00.

Focuses on both basic and applied research interpretation.

CSD 501. Workshops in Speech-Language Pathology and Audiology. 3.00

Designed to provide a detailed study of a particular topic of interest in speech pathology and/or audiology. *Prerequisite: Permission of department head.*

CSD 510. Seminar in Audiology (Clinical Methods) 1.00 - 3.00

This course addresses selected topics, issues and other content designed to prepare students for clinical practice in audiology. Content is treated on an introductory level with emphasis upon problem solving, integration of information across didactic and practical knowledge toward clinical skill development.

CSD 511. Instrumentation in Audiology. 3.00

A study of topics and procedures of instrumentation that are fundamental to clinical practice including electricity and electronics, filters, calibration, acoustical impedance, analog and digital signals, and acoustics.

CSD 512. Anatomy and Physiology of the Auditory and Vestibular Systems. 3.00

Advanced study of the anatomy and physiology of the auditory and vestibular systems to include cochlear and neural mechanisms of sound coding.

CSD 513. Anatomy and Physiology of the Central Auditory Pathway. 2.00.

Advanced study of the anatomy and physiology of the central auditory pathway from the cochlear nucleus to the auditory cortex. Neural bases for encoding cues for intensity, frequency and localization will be discussed. Normal mechanisms will be discussed in light of diagnosis and treatment of pathological processes.

CSD 514. Audiologic Assessment. 3.00

A study of auditory disorders and the measurement of hearing including an overview of behavioral and physiologic measures. Emphasis is placed on the behavioral evaluation of the peripheral system, tests of cochlear and retrocochlear differentiation, and immittance measures.

CSD 515. Human Communication and Aural Rehabilitation. 3.00

This course focuses on the impact of hearing loss on human communication across the lifespan. Aural habilitation and rehabilitation procedures common to the 20th century are compared with today's trends and with projected advances expected for the 21st century.

CSD 516. Vestibular Physiology and Testing. 3.00

Advanced study of the anatomy and physiology of the oculomotor and vestibular systems. Detailed study of basic and advanced concepts in clinical testing, treatment and mechanisms of rehabilitation of disorders of the vestibular and balance system.

CSD 519. Audiology Clinical Practicum A. 3.00

Supervised clinical practicum at the Communication Sciences and Disorders Speech-Language-Hearing Clinic and a variety of other settings. Lab fee required. *Prerequisite: CSD 510.*

CSD 520. Advanced Sign Language. 3.00

Advanced sign language will enhance the communication skills of the student whose core vocabulary and knowledge of application of sign language are basic. The course arranges opportunities for building fluency and reception, as well as expanding knowledge of sign systems and the appropriateness in a given situation. *Prerequisite: CSD 420 or permission of instructor.*

CSD 522. Communication Disorders of the Traumatically Brain Injured. 2.00.

An overview of the role of speech-language pathology in the interdisciplinary management of cognitive-communicative deficits associated with traumatic brain injury. *Prerequisite: CSD 604 and permission of the instructor for non-departmental majors.*

CSD 523. Psychoacoustics. 3.00

A study of the relationship between a sound stimulus and the behavioral response it produces in a listener.

CSD 525. Seminar in Audiology (Clinical Methods II) 1.00 - 3.00

This course addresses selected topics, issues and other content designed to prepare students for clinical practice in audiology. Content is treated on an introductory level with emphasis upon problem solving, integration of information across didactic and practical knowledge toward clinical skill development.

CSD 527. Aging and Communication 1.00

A study of the processes underlying normal aging and the potential effects of senescence on communication abilities. Emphasis is placed on the speech, language, and cognitive therapeutic interventions relative to geriatric care. *Prerequisite: CSD 641. Language Disorders in Adults (recommended).*

CSD 528. Autism 1.00

Focus on demographics of autism spectrum disorders, historical and contemporary diagnostic and treatment procedures, and the role of the speech-language pathologist in interdisciplinary programs.

CSD 529. Augmentative Communication 1.00

Assessment and intervention strategies for the speechless population will be presented. Students will participate in demonstrations of alternative communication systems. An interdisciplinary team approach to (re)habilitation will be studied.

CSD 530. Early Intervention 1.00

Introduction to early intervention programs and approaches for infants and toddlers with emphasis on the role of the speech-language pathologist in team intervention.

CSD 531. Industrial Audiology. 2.00.

A study of the effects of noise upon humans and topics relevant to hearing conservation, such as noise assessment and risk factors, hearing protectors, audiometric testing, employee training and record keeping.

CSD 533. Business Applications in Audiology. 3.00

This course focuses on the various professional and business practices and regulations that impact audiology. Topics include licensure, certification, ethical and professional

standards of practice, as well as practice management and business methods common to the practice of audiology.

CSD 539. Audiology Clinical Practicum B. 2.00.

Supervised clinical practicum at the Communication Sciences and Disorders Speech-Language-Hearing Clinic and a variety of other settings. Lab fee required. *Prerequisite:* CSD 519 and CSD 525.

CSD 540. Language Development and Disorders in Children for School Personnel. 3.00

A comprehensive study of the language development of children, the various characterizations of language impairment in children, and intervention issues and strategies, with a particular focus on academic and educational implications and interdisciplinary management in daycare, preschool and school environments.

CSD 544. Evaluation and Treatment of Swallowing Disorders. 3.00

Current research and clinical management will be presented of individuals showing difficulties in feeding orally and aspirating. Normal physiology of deglutition and the multidisciplinary approach toward the management of dysphagia will be emphasized.

CSD 550. Seminar in Audiology (Tinnitus). 1.00 - 3.00

This course addresses selected topics, issues and other content designed to prepare students for clinical practice in audiology. Content is treated on an intermediate level with emphasis upon problem solving and integration of information across didactic and practical knowledge toward clinical skill development.

CSD 551. Introduction to Hearing Aids. 3.00

A study of hearing handicap and its management in adults, including amplification technologies, electroacoustic analyses, and prescription and verification procedures. Emphasis is on the foundations of clinical management.

CSD 560. Neuromotor Speech Disorders. 3.00

The objective of this course is to familiarize students with theoretical and clinical aspects in the areas of dysarthria and apraxia. Similarities and differences of the speech impairments in these disorders will be demonstrated and applied to diagnosis and treatment. *Prerequisite:* CSD 604.

CSD 581. Speech Practicum A. 2.00.

This is the first in a series of practicum courses. It includes both practice-base and didactic components.

CSD 582. Speech Practicum B. 2.00.

This is the second in a series of required practicum courses. It includes both practice base and didactic components. *Prerequisite:* CSD 581.

CSD 583. Speech Practicum C. 2.00.

This required practicum course is an intermediate level practice-based experience. *Prerequisite:* CSD 581, CSD 623 and CSD 640.

CSD 600. Research in Audiology. 3.00

Evaluations of research designs and methods in audiology, critique of published articles and student involvement in designing experiments on assigned topics.

CSD 604. Neuroanatomy and Neurophysiology of Speech & Language. 3.00

Neuroanatomy and neurophysiology with an emphasis on speech and language behavior. Comprehensive examination of the neuroanatomic and neurophysiologic substrate for cognition and communication.

CSD 605. Physiological and Acoustical Phonetics. 3.00

Respiratory, phonatory, resonatory and articulatory components of speech output are considered. Theoretical models of speech production and reception are discussed.

CSD 611. Neurophysiologic Measures I. 4.00. - 5.00

Study of the neurophysiological and electrophysiological properties of the human peripheral and central auditory pathways.

CSD 619. Audiology Clinical Practicum C. 3.00

Supervised clinical practicum at the Communication Sciences and Disorders Speech-Language-Hearing Clinic and a variety of other settings. *Prerequisite:* CSD 539 or permission of instructor.

CSD 620. Seminar in Audiology (Research Proposal) 1.00 - 3.00

This course provides students the opportunity to explore research questions in various areas of audiology, to develop hypotheses and design appropriate research methodology. The expectation at the conclusion of the course is that students will have designed a research proposal that can provide a foundation for dissertation research.

CSD 621. Neurophysiologic Measures II. 4.00.

Advanced study of the neurophysiological and electrophysiological properties of the human auditory and related sensory and motor systems.

CSD 622. Advanced Hearing Aids. 4.00.

An advanced study of hearing handicap and its prosthetic management. Various technologies, prescription methods and verification procedures are critically reviewed.

CSD 623. Pediatric Speech Sound Disorders. 3.00

Speech sound production and associated skills in children are considered, including articulation, motor planning and execution, phonological patterns, and phonological awareness. Emphasis is given to the identification of differences versus disorders and specific assessment and intervention approaches for various speech sound disorders.

CSD 625. Pediatric Dysphagia 1.00

The study of feeding and swallowing disorders in children. Instrumental and neuro developmental evaluation will be presented. Management techniques for feeding and swallowing difficulties will be advanced.

CSD 629. Audiology Clinical Practicum D. 3.00

Supervised clinical practicum at the Communication Sciences and Disorders Speech-Language-Hearing Clinic and a variety of other settings. *Prerequisite:* CSD 619 or permission of instructor.

CSD 632. Processes and Disorders of Speech Fluency. 2.00.

Advanced diagnostic and therapeutic aspects of stuttering for children and adults are studied. Particular emphasis is placed on differentiating incipient stuttering from normal disfluencies.

CSD 633. Auditory Pathophysiology. 3.00

A study of the various disorders of the external, middle and inner ears; the retrocochlear and central auditory systems; and the vestibular and balance system.

CSD 639. Audiology Rotation A. 3.00

Supervised clinical practicum at clinical settings external to the Communication Sciences and Disorders Speech-Language-Hearing Clinic. *Prerequisite:* CSD 629, permission of instructor and head of department.

CSD 640. Advanced Children's Language Disorders. 3.00

Comprehensive study of children's pragmatic, semantic and syntactic impairments. Emphasis is placed upon etiologies, evaluation and habilitation procedures.

CSD 641. Language Disorders in Adults. 3.00

Theoretical comparative aspects and clinical management of aphasia in adults are emphasized. Communication disorders associated with right hemisphere brain damage are also considered. *Prerequisite:* CSD 604

CSD 656. Voice Disorders. 2.00.

The study of laryngeal functions and disorders. In-depth study of acoustic and physiologic parameters of the vocal mechanism. Emphasis is given to the diagnosis and management of vocal pathologies.

CSD 680. Reading and Research 1.00 – 3.00

Designed to allow graduate students to pursue independent study and/or research in the area of speech, language and hearing disorders under appropriate faculty supervision. May be repeated for credit. *Prerequisite:* Permission of department head.

CSD 682. Speech Practicum D. 2.00.

This required practicum course is an advanced level practice-based experience. *Prerequisite:* CSD 581, CSD 582 and CSD 583.

CSD 683. Speech Practicum E. 2.00. – 7.00

This required practicum course is an advanced level practice-based experience. Both CSD 683 and CE 650 may be repeated for credit. *Prerequisite:* CSD 682 and, if in an adult setting, CSD 544 and permission of department head.

CSD 690. Advanced Seminar in Speech Pathology and Audiology 1.00 – 3.00

This course will cover advanced considerations relative to the diagnosis and management of individuals with speech, language and hearing disorders. *Prerequisite:* Permission of department head.

CSD 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated.

CSD 700. Thesis Research 1.00 – 6.00

The thesis option generally requires three to four semesters to complete. Students choosing the thesis option will not be required to complete the written comprehensive examination. Students should talk with their adviser prior to this option. This course is graded on a satisfactory/unsatisfactory (S/U) basis.

CSD 710. Seminar in Audiology (Geriatric Audiology) 1.00

The study of the aging process as it relates to communication and hearing. Evaluation and treatment strategies for the geriatric client are emphasized, along with special topics related to aging including auditory anatomy and physiology, diagnostic and rehabilitative services, and changes in auditory perception with advancing age.

CSD 711. Pediatric Audiology. 3.00

Normal and pathological development of the auditory system; pediatric audiometric assessment; auditory and communication aspects in the habilitation of hearing-impaired children.

CSD 717. Directed Research 1.00 – 3.00

This course sequence provides opportunity for research in an area of special interest as directed by a faculty mentor. Emphasis on developing a question and hypothesis; selecting subjects and variables to investigate; collecting and analyzing data; and reporting results should provide the student with a meaningful research experience.

CSD 718. Independent Study 1.00 – 3.00

This course sequence provides opportunities in-depth study in an area of special interest as directed by a faculty mentor.

CSD 719. Audiology Clinical Rotation B. 3.00

Supervised clinical practicum at clinical settings external to the Communication Sciences and Disorders Speech-Language-Hearing Clinic. *Prerequisite:* CSD 639 and permission of head of department.

CSD 720. Seminar in Audiology (Cochlear Implants) 1.00 – 3.00

This course addresses selected topics, issues and other content designed to prepare students for clinical practice in audiology. Content is treated on an advanced level with emphasis upon problem solving and integration of information across didactic and practical knowledge toward clinical skill development.

CSD 729. Audiology Clinical Rotation C. 3.00

Supervised clinical practicum at clinical settings external to the Communication Sciences and Disorders Speech-Language-Hearing Clinic *Prerequisite:* CSD 719 and permission of head of department.

CSD 731. Medical Audiology. 2.00.

Advanced study of the diagnosis and evaluation of hearing and balance disorders.

CSD 791. Directed Research 1.00

This course provides the opportunity for research in an area of special interest as directed by a faculty mentor. Students are required to participate in gathering data and observing the process of developing new knowledge through research. Emphasis is placed on the student becoming an expert consumer of research, as well as gaining an appreciation for research methodology.

CSD 805. Methods of Measurement in CSD. 3.00

Principles for applying instruments, technologies and measurement tools to research in a wide variety of investigations and clinical applications in communication sciences and disorders. A survey and in-depth review of the principal equipment and instrumentation that is available and predicted to be available to researchers and clinicians in the communication sciences and disorders.

CSD 806. Ph.D. Professional Development Seminar I 1.00

Discusses issues related to success in Ph.D. programs and development of skills as a researcher, leader, expert clinician and academician, such as characteristics of successful Ph.D. students; approaches to integrating course work; research learning; preparing review papers and research proposals; ethics in Ph.D. education and research; issues related to IRBs; intellectual property; collaborations; scholarly networks; authorships; and the funding of research. Topics are selected and designed to meet the individual needs of specific cohorts of CSD Ph.D. students early in their programs.

CSD 807. Ph. D. Professional Development Seminar II 1.00

Discusses issues related to preparing for the dissertation experience and life beyond a Ph.D. program. Topics may include strategies for writing up scientific results; differences between dissertations and research articles; getting into print; strategies for presenting research and strategic selection of venues; and planning and developing an academic/research career, such as the first job and post docs; choosing the employer; the application and selection process; establishing oneself as a researcher, scholar and academic; surviving the first university position; facts and fiction of tenure and promotion; and thinking beyond the first job (career planning). Specific topics are selected and designed to meet the individual needs of specific cohorts of CSD Ph.D. students that apply later in their programs.

CSD 810. Professional Seminar in Audiology 1.00 – 3.00

This course addresses selected topics, issues and other content designed to prepare students for clinical practice in audiology. Content is treated on an expert level with emphasis upon problem solving, integration of information across didactic and practical knowledge toward clinical skill development.

CSD 817. Directed Research 1.00 - 3.00

This course sequence provides opportunity for research in an area of special interest as directed by a faculty mentor. Emphasis on developing a question and hypothesis, selecting subjects and variables to investigate, collecting and analyzing data, and reporting results should provide the student with a meaningful research experience.

CSD 818. Independent Study 1.00 - 3.00

This course sequence provides opportunities in-depth study in an area of special interest as directed by a faculty mentor.

CSD 819. Audiology Externship A 1.00 - 6.00

Full-time clinical practicum with limited supervision at clinical settings external to the Communication Sciences and Disorders Speech-Language-Hearing Clinic. *Prerequisite:* CSD 729, permission of instructor and head of department.

CSD 820. Professional Seminar in Audiology 1.00 - 3.00

This course addresses selected topics, issues and other content designed to prepare students for clinical practice in audiology. Content is treated on an expert level with emphasis upon problem solving and integration of information across didactic and practical knowledge toward clinical skill development.

CSD 839. Audiology Externship C 1.00 - 6.00

Full-time clinical practicum with limited supervision at clinical settings external to the Communication Sciences and Disorders Speech-Language-Hearing Clinic. This course may be repeated with permission of instructor for up to 6 credits. *Prerequisite:* CSD 829 or permission of instructor.

CSD 841. Teaching Experience in CSD. 2.00.

With a faculty mentor, the student will engage in team-teaching of selected undergraduate/graduate course(s). In preparing for the teaching experience, students will examine scholarly literature related to the development of course objectives and learning activities, theories or students' learning at the college level, and method of assessment at the college level.

CSD 842. Supervision Experience in CSD. 2.00.

Students enrolled in the course may be supervised in a clinical assignment or, if ASHA certification has been awarded, as a supervisor. Students and supervisors will be equipped for participation in the clinical teaching process. The tasks and skills of clinical teaching is a specialty area of practice as it relates to the interaction between a clinician and client. Clinical teaching will be examined through observation, conferences, review of records and communication skills. Competencies for the student clinician and for the clinical teacher will be examined in the literature and incorporated into presentation of research in supervision and current trends in work settings.

CSD 851. Advanced Seminar in CSD: Child Language Disorders. 2.00. - 3.00

This seminar focuses on the current views of etiology, assessment and treatment procedures of child language disorders.

CSD 853. Advanced Seminar in CSD: Aerodigestive Concerns. 2.00. - 3.00

This seminar focuses on the current views of etiology, assessment and treatment procedures of aerodigestive disorders.

CSD 858. Advanced Seminar in CSD: Neurolinguistics. 2.00. - 3.00

This seminar would be devoted to study and discussion of one or more topics current in neurolinguistic investigation. Possible topics include: PED and fMRI studies of language processing; event-related potentials; connectionist models of speech errors and paraphasias; morphosyntactic disorders in language disorders; role of prosody in language processing and neurological disorders; pragmatic studies of populations with brain damage.

CSD 861. Advanced Seminar in CSD: Voice Disorders. 2.00. - 3.00

This seminar focuses on the current views of etiology, assessment and treatment procedures of voice disorders.

CSD 862. Advanced Seminar in CSD: Selected Topics I. 2.00. - 3.00

This seminar focuses on advanced study of selected topics of interest in communication sciences and disorders. May be repeated for credit.

CSD 867. Experimental Phonetics. 3.00

Advanced and in-depth study of speech perception and production, including acoustics, intelligibility, current technologies and instrumentations, and theoretical models guiding research approaches.

CSD 917. Directed Research 1.00 - 3.00

This course sequence provides opportunity for research in an area of special interest as directed by a faculty mentor. Emphasis on developing a question and hypothesis, selecting subjects and variables to investigate, collecting and analyzing data, and reporting results should provide the student with a meaningful research experience.

CSD 918. Independent Study 1.00 - 3.00

This course sequence provides opportunities in-depth study in an area of special interest as directed by a faculty mentor.

CSD 920. Doctoral Dissertation in CSD 1.00 - 12.00

Culminating research project. Enrollment beyond second semester is contingent upon dissertation committee approval. This course is graded on a satisfactory/unsatisfactory (S/U) basis.

CSD 921. Dissertation Continuance 1.00

Required continuance for dissertation after 12 credits earned for CSD 920.

Communication Studies

SCOM 500. Introduction to Advocacy Studies. 3.00

A survey of advocacy inquiry as a practice of communication by a number of professional and academic fields and disciplines. Students will examine and debate important theoretical, ideological, ethical and moral implications of advocacy practiced in politically, socially and culturally diverse societies. Emphasis will be placed on a multi-disciplinary approach to advocacy studies.

SCOM 502. Introduction to Teaching Fundamental Human Communication. 0.00

This course introduces students to the issues, methods and materials for teaching communication in the setting of higher education. Students will examine pedagogical and communication theory, analyze research in communication education/instructional communication, study learning theories and styles, and work to develop a competency in teaching communication skills and concepts to others. This course is required only of all those awarded Assistantships.

SCOM 540. Seminar in Communication Theory. 3.00

A survey of major communication theories. Historicizes the major theoretical perspectives and debates in Communication Studies. Focuses on application of communication theory toward advocacy.

SCOM 541. Seminar in Rhetorical Theory. 3.00

A survey of classical, modern and contemporary theories of rhetoric. The course examines the historical circumstances, situated practices of communication and advocacy, and mediums of delivery that have influenced differing iterations of rhetorical theory; its influence upon historical and contemporary practices of communication and advocacy; and the invention, arrangement and styles of theoretical disputes related to rhetorical theory.

SCOM 542. Seminar in Critical Theory and Communication. 3.00

Advanced study of critical cultural theory and communication. Historicizes major theoretical perspectives and debates and considers implications for the study and practice of communication and advocacy.

SCOM 580. Seminar in Communication Research Methods. 3.00

An examination of undergirding research design philosophies, as well as an introduction to qualitative and quantitative research methods used in communication and advocacy studies. Students complete a research prospectus.

SCOM 600. Advocacy Processes and Techniques. 3.00

This advanced skills course emphasizes effective advocacy communication for a variety of contexts and focuses on a range of media, formats and causes. Students will practice and refine writing, oral presentation, organization and visual design skills, while analyzing the most effective processes for strategic communication messages.

SCOM 610. Strategic Communication. 3.00

An advanced seminar focusing on persuasion theory and communication methodology relevant to strategic communication in diverse cultural settings. Emphasis upon message analysis in cross-cultural contexts at various communication levels including interpersonal, small group, organizational, and public. Consideration of communication strategies and tactics embedded in adversarial belief systems. This seminar will use lecture-discussion, case studies, guest speakers, and team projects.

SCOM 611. Public Policy, Communication and Governmental Advocacy. 3.00

Introduces practices and theories of political communication and advocacy in public policy. Students will be equipped with the knowledge and communication skills necessary to influence policy-making processes and to understand advocacy by citizens, businesses, labor and interest groups. Topics include history and current practices of public advocacy, communication plan development and management, legal and ethical considerations, and the future of the public communication industry.

SCOM 612. Stakeholder Engagement. 3.00

An advanced seminar focusing on understanding stakeholders and decision-making processes. Engaging stakeholders is central to strategic communication. This seminar explores a wide range of stakeholder theories as a foundation for successful applied strategic communication. The seminar covers both the critical evaluation of theories and application in cases.

SCOM 613. Strategic Communication Campaigns. 3.00

This seminar examines principles, methods, theories, practices, and cases central to the development and strategic management of communication advocacy campaigns. Focus is on designing, planning, implementing, and evaluating ethical persuasive communication programs, with emphasis on behavioral change as well as mutual understanding and support. Best professional practices, including case studies, will be utilized to extract and articulate pragmatic lessons.

SCOM 615. Special Topics in Strategic Communication. 3.00

Study of current topics and issues in strategic communication and advocacy. Emphasis on contemporary issues, theories and research. Course content varies based on faculty expertise.

SCOM 625. Interpersonal Communication as Advocacy. 3.00

This course explores theoretical approaches to interpersonal communication as advocacy. After reviewing theory and research related to interpersonal message strategies and designs, students will examine how interpersonal communication functions as advocacy in environmental, health and relational contexts. Students will also discuss the ethics of advocacy, compliance gaining and compliance-resistance.

SCOM 627. Facilitating Collaborative Governance and Public Problems. 3.00

This course offers training and practice in facilitation skills needed to guide advocacy groups, organizations, governmental agencies and communities as they grapple with complex challenges, make informed choices for action and work together to establish and achieve collective goals. In addition, this course will consider how these processes are best integrated with and play a role in community, organizational and institutional structures and influence policy change.

SCOM 630. Culture and Conflict Resolution. 3.00

The course explores the relations between culture and conflict that emerge when competing worldviews become conflicted regarding power, control, and influence. Emphasis is on communication and conflict resolution theory with application to skill competencies required for facilitation, negotiation, and mediation. Integration of cross-cultural reconstruction teams into distressed communities considered.

SCOM 650. Applied Organizational Communication. 3.00

Examines organizational communication theory and research in applied organizational contexts using a case study approach. Attends to analysis of small group and organizational decision making processes, team functioning, and strategic communication among diverse stakeholders. Focus on organizational communication practice in non-profit advocacy groups.

SCOM 651. Environmental Decision Making: Conflict, Advocacy and Participatory Processes. 3.00

A 'process advocacy' approach to environmental decision making. Examines theories/techniques to develop and evaluate civic engagement and conflict resolution/collaborative approaches related to environmental science, resource management and public planning. Public participation legal requirements will be reviewed, case studies discussed, and opportunities for improving public participatory processes will be assessed.

SCOM 652. Environmental Justice: Advocacy and Perspectives. 3.00

Critical overview of the histories and perspectives of environmental justice movements, including discourses of environmental racism, classism, and sexism; environmental in/equity; and just sustainability. Examines the underlying principles guiding advocacy practices of various environmental justice movements, exploring rhetorical strategies used to advocate just access to nature resources and distribution of environmental burdens.

SCOM 653. Critical Perspectives: Environment, Advocacy, and Public Culture. 3.00

A survey of critical theory and perspectives related to the study of environmental communication. Critical theories and related topics such as popular and consumer culture, political economy, power and ideology, science and technology will be explored. Environmental campaigns and cultural practices will be explored. Environmental campaigns and cultural practices will be examined from a variety of critical perspectives.

SCOM 654. Environmental Campaign Advocacy and Social Influence. 3.00

Addresses complex dynamics, strategies and tactics of environmental campaigns by grassroots organizations, interest groups, governmental institutions and international organizations to advocate for particular environmental (and anti-environmental) policies and social change. This course takes a case studies approach to environmental campaigns and analyzes campaigns from a variety of rhetorical and communication theories.

SCOM 655. Special Topics in Environmental Communication. 3.00

In depth exploration and analysis of communication theory, context, topic or problem related to the study of environmental communication. Course content varies based on faculty expertise.

SCOM 660. Seminar in Risk and Crisis Communication. 3.00

This advanced seminar explores risk and crisis communication theories, models and approaches. Students learn to critically assess and evaluate risk and determine and formulate appropriate communication strategies, and they are provided an opportunity to explore best practices and application of theories in practice.

SCOM 665. Special Topics in Communication Theory and Applied Contexts. 3.00

In-depth exploration and analysis of communication theory and applied contexts addressing a topic, process, problem, or controversy related to communication theory or practice. Course content varies based on faculty expertise.

SCOM 670. Health Communication Advocacy & Social Influence: Campaign Development and Delivery. 3.00

This course systematically explores and elaborates key concepts, principles and underlying theories pertinent to public health communication campaigns and advocacy practices. Students are immersed in all facets of campaign conceptualization, design, delivery and evaluation.

SCOM 671. Intercultural Health Communication Advocacy. 3.00

This course explores how intra-cultural meaning systems intersect and compete across cultures in health and environmental communication focusing on advocacy practices between health care providers and individuals. Provider and patient intercultural competencies, cultural beliefs, traditions, assimilation levels, and medical care decision making models are examined across cultures to ascertain how those are negotiated and managed; with a particular focus on underserved, disenfranchised groups.

SCOM 673. Communication, Advocacy and Health Organizations. 3.00

This course addresses a variety of communication challenges faced by members and clients of healthcare organizations. Topics examined include various organizational structures within the healthcare industry, provider communication education and competence, and the delivery of healthcare services to clients. Throughout the course, contemporary applications of content are analyzed and evaluated.

SCOM 674. Patient-Provider Communication and Advocacy. 3.00

This course explores patient-provider communication from patient and provider perspectives. Advocacy can play a leading role for providers and patients with implications for decision making, mutual support and trust. Students will examine health patient-provider interaction, health decision-making, empowerment strategies, key impacts of managed care, salient factors that shape patient outcomes and selected theoretical frameworks for explaining health patient provider communication.

SCOM 675. Special Topics in Health Communication. 3.00

In depth exploration and analysis of communication theory, context, topic or problem related to the study of health communication and/or advocacy. Course content varies based on faculty expertise.

SCOM 680. Readings & Research. 3.00**SCOM 681. Seminar in Rhetoric and Criticism. 3.00**

A graduate seminar in the theories and practices of rhetorical criticism. Examines and applies classical and contemporary theories and methods for analyzing and evaluating public address and other significant forms of communication. Students will produce an original scholarly essay using one or more types of criticism. *Prerequisite: SCOM 580*

SCOM 683. Seminar in Quantitative Communication Research Methods. 3.00

An intensive study of quantitative communication research methods, with emphasis on design and implementation of a research project. *Prerequisite: SCOM 580*

SCOM 685. Seminar in Qualitative Research Methods. 3.00

Survey of qualitative communication research methods. Overviews the paradigms in qualitative research, research planning and conceptualization; participant observation; in-depth interviews; focus group interviews; and qualitative data analysis. Students will write an original scholarly essay answering a communication question using qualitative research methods. *Prerequisite: SCOM 580 or permission of instructor.*

SCOM 695. Fieldwork in Communication and Advocacy. 3.00

An independent study or practicum for students to pursue research projects under the guidance of faculty, or develop skills and gain professional experience working in the field of communication and advocacy *Prerequisite: Permission of adviser and graduate program director.*

SCOM 700. Communication Studies Thesis. 3.00 - 6.00

Original communication research toward the completion of a master's thesis Supervised by the chair of the student's thesis committee. This course is graded on a Satisfactory/Unsatisfactory/Incomplete (S/U/I) basis.

SCOM 701. Communication Studies Internship. 3.00 - 6.00

Practical field experience in applying health and environmental communication advocacy to problems or issues encountered in professional settings. Internships can include: governmental, non-profit and for profit organizations. This course is graded on a Satisfactory/Unsatisfactory/Incomplete (S/U/I)

Computer Science

CS 501. Workshop in Computer Science 1.00 - 3.00

Designed to provide workshop experience in a variety of computing areas. Does not satisfy graduation requirements for the Master of Science degree in computer science. *Prerequisite: Permission of the concentration coordinator.*

CS 502. Introduction to Information System Security. 3.00

This course provides an introduction to the design and management of operating systems and networks, focusing on those aspects that affect information security. It provides students with the skill or ability to design, execute and evaluate information system security procedures and practices. This course does not satisfy any requirements for the Master of Science degree in computer science. *Prerequisite: Approval of instructor.*

CS 503. Information Systems Security Management 1.00

An advanced study of the basic material needed to manage an information system. Topics covered include granting final approval to operate, accreditation of the system, and verifying compliance with stated policies and procedures. This course does not satisfy any requirements for the Master of Science degree in computer science. *Prerequisite: CS 502, CS 560 or CS 610.*

CS 504. Information System Security Administration 1.00

An advanced course to prepare a student to ensure information systems and networks are used securely; to identify and report security incidents; to maintain configuration control of systems and software; and to identify anomalies or integrity loopholes. This course does not satisfy any requirements for the Master of Science degree in computer science. *Prerequisite: CS 502, CS 560 or CS 610.*

CS 505. Information System Security Operations 1.00

This course covers the basic knowledge needed by information system security officers to protect their information systems. Topics covered include certification, accreditation, site security policy, security policy enforcement and security reporting. This course does not satisfy any requirements for the Master of Science degree in computer science. *Prerequisite: CS 502, CS 560 or CS 610.*

CS 506. Assessment of Secure Information Systems 1.00

This course considers the assessment of the technical and non-technical security features of an information system in an operational configuration. Upon completion of the course, students should be able to identify the assurance levels achieved in meeting all applicable security policies, standards and requirements. This course does not satisfy any requirements for the Master of Science degree in computer science. *Prerequisite: CS 502, CS 560 or CS 610.*

CS 510. Object Oriented Programming. 3.00

Fundamental programming techniques, including basic data types, control structures, algorithm development, procedures, arrays, and the definition of abstract data types. Does not satisfy graduation requirements for the Master of Science degree in computer science.

CS 511. Computer Organization. 3.00

The study of the organization of computer systems, including a brief study of number systems and digital circuits. Also covers basic components of computer systems such as main memory, CPU, I/O and their interconnection mechanisms. Does not satisfy graduation requirements for the Master of Science degree in computer science.

CS 512. Data Structures. 3.00

This course covers commonly used data structures including stacks, queues and lists using both static and dynamic memory allocations and including elementary performance analysis of these data structures. Does not satisfy graduation requirements for the Master of Science degree in computer science *Prerequisite: CS 510 or equivalent.*

CS 515. Foundations of Computer Science. 3.00

Survey of fundamental computer science concepts such as iteration, recursion, induction, analysis of algorithms, combinations and probability, data structures, automata theory and regular expressions, context-free grammars and parsing, and propositional and predicate logic. This course does not satisfy graduation requirements for the program.

CS 523. Ethics, Law and Policy in Cyberspace. 3.00

Study of ethical issues, legal resources and recourses, and policy implications inherent in our evolving online society. Provides an overview of the ethical challenges faced by individuals and organizations in the information age. Introduces the complex and dynamic state of the law as it applies to behavior in cyberspace. *Prerequisite: CS 550.*

CS 530. Programming Languages. 3.00

Study of the fundamental principles of programming language design and their realization in actual programming languages. Examines programming languages from the procedural, object-oriented, functional and declarative paradigms. Introduces basic concepts of grammars and parsing. *Prerequisite: CS 240 and CS 350, or CS 511 and CS 512, or equivalent.*

CS 531. Secure Programming. 3.00

A survey of concepts related to secure and rugged programming. Continues both the theoretical foundations of secure and rugged programming and various issues that arise in practice. Some language-specific and platform-specific issues are addressed. *Prerequisite: Unconditional Admission as a Computer Science graduate student.*

CS 550. Operating Systems. 3.00

Concepts and principles of multiple-user operating systems. Memory, CPU, I/O device allocation, scheduling and security. Memory hierarchies, performance evaluation, analytic models, simulation, concurrent programming and parallel processors. Completion of a student project is a significant part of the course *Prerequisite: Unconditional admission as a computer science graduate student.*

CS 552. Applied Complexity Theory. 3.00

Algorithms (sorting and searching, graph theory, arithmetic) with space and time complexity and analyses; formal models of computation; theoretical aspects of computational complexity, including complexity measures and hierarchies, intractable problems, and the P=NP question. Other topics in theoretical computer science with applications. *Prerequisite: Unconditional admission as a computer science graduate student.*

CS 555. Secure Software Engineering. 3.00

An overview of methodologies, tools and techniques for producing secure software systems. Students will cooperatively develop a secure software product. The course will also provide an introduction to professional resources and ethical issues for software developers. *Prerequisite: CS 240, CS 512 or equivalent.*

CS 557. Information Security. 3.00

Fundamental concepts of information security including identification and authentication, access control, security models, security kernels, and Windows and Unix security. Discussions will cover the historical development of information security, cryptography, PKI key management, application-level security issues and security evaluation. *Prerequisite: CS 550.*

CS 559. Computer Security. 3.00

Computer security is one of the three traditional branches of information security. It studies the security of digital data within a computer system, either stand-alone or networked, and the control of the computer system. Basic computer security building blocks include entity authentication, access control (including discretionary access control and mandatory access control [MAC]), MAC-based security models, formal methods, security development and evaluation, security auditing, and database access control. *Prerequisite: CS graduate students who have been unconditionally admitted to the graduate program.*

CS 560. Networks and Network Security. 3.00

Fundamental concepts, principles, and practical networking and internetworking issues relevant to the design, analysis and implementation of enterprise-level trusted networked information systems. Topics include networking and security architectures, techniques and protocols at the various layers of the Internet model. *Prerequisite: CS 550.*

CS 574. Database Systems. 3.00

Types of physical storage and access methods; data models; relational algebra and calculus, data definition and query languages; dependencies, decomposition and normalization; database design; recovery; consistency and concurrency; distributed databases. Examples from commercial databases. *Prerequisite: CS 350, CS 511 or equivalent.*

CS 585. Selected Topics I. 3.00

Study of selected topics not otherwise covered in the regular offerings of the department. May be repeated for credit when course content changes.

CS 588. Introduction to Computer Graphics. 3.00

Problems, objectives and study of computer graphics to include hardware, software and applications. Graphics, data structures and languages. Vectors, curves and character generation. Interactive display devices. Construction of hierarchical image lists. Surface representations. Discussion of problems of current interest. *Prerequisite: CS 510 and knowledge of calculus.*

CS 610. Networking and Security. 3.00

Fundamental concepts, principles, and practical networking and internetworking issues relevant to the design, analysis and implementation of enterprise-level trusted networked information systems. Topics include networking and security architectures, techniques and protocols at the various layers of the Internet model. *Prerequisite: CS 550.*

CS 621. Software Assurance. 3.00

This course investigates the engineering of robust security solutions. We study security problem definition and modeling, policy-to-code modeling, security factoring of software source code, model-based vulnerability analysis, and how security solutions are related to security problems through an assurance argument. *Prerequisite: CS 555 and CS 652.*

CS 625. Secure Operations. 3.00

This course covers the principles of secure composition of heterogeneous security components such as servers, firewalls, workstations and intrusion detection systems. It also covers principles and practice related to secure operation of existing distributed systems. Principles of penetration testing for assessment of system security are also addressed. *Prerequisites: CS 627 and CS 660.*

CS 627. Cryptography: Algorithms and Applications. 3.00

Cryptographic techniques to achieve confidentiality, integrity, authentication and non-repudiation are examined. The underlying mathematical concepts are introduced. Topics to be

covered include symmetric and public key encryption, hashing, digital signatures, cryptographic protocols and other recent developments in the field. *Prerequisite: Unconditional admission as a computer science graduate student.*

CS 630. Compiler Theory and Implementation. 3.00

This course teaches an introduction to the theory of grammars and the mathematical foundations of compilers along with the practical considerations for developing them. The course covers practical aspects of all phases of the compilation process including lexical analysis, parsing, code generation and code optimization. Students develop a compiler for a small grammar using the appropriate techniques.

CS 633. Computer Forensics. 3.00

This course teaches how to perform computer crime investigations. The course covers the recovery and analysis of digital evidence, addressing legal and technical issues. Forensic examination of Windows and Unix systems are used to illustrate typical investigative processes. *Prerequisite: CS 550.*

CS 635. Secure Network Operations. 3.00

Standard network security techniques for monitoring and maintaining an organization's internal and external networks. Students will learn how to detect network-based attacks, diagnose an attacker's intent, and respond to and recover from intrusions. *Prerequisite: CS 610.*

CS 640. Malware Analysis. 3.00

This course deals with the classification, identification and forensic analysis of malicious code found on computing systems or transmitted via digital networks. Topics will include types and classification of malware, a review of assembly programming and shell code exploits, reverse engineering techniques, dynamic and static code analysis, as well as techniques to identify and capture malicious code. *Prerequisite: CS 633.*

CS 644. Artificial Intelligence. 3.00

Application of heuristics to problem solving; perception and pattern recognition; search methods, production systems and knowledge representation; applications to expert systems, automatic programming and natural language processing. *Prerequisite: CS 240 or CS 512.*

CS 652. Formal Methods for Information Security. 3.00

A formal specification language is presented with case studies, proofs and the formal specification of software components. Additional topics may include formal security policy modeling, seminal formal systems, first-order logic, set theory, relations, functions, sequences, bags, free types, formal and rigorous proof, immanent reasoning, reification, decomposition and Floyd-Hoare logic.

CS 660. Advanced Network Security. 3.00

This is a project-based course. Students will learn advanced network security concepts, conduct information security research and apply what they have learned throughout the information security master's program to better secure critical information infrastructure. *Prerequisite: CS 610.*

CS 666. Software Construction and Testing. 3.00

Study of the state of the art in software construction and testing. Topics include tools, techniques and practices for software production, testing, verification, validation and evaluation. *Prerequisite: CS 555.*

CS 680. Reading and Research. 3.00

Opportunity for supervised reading and research in areas of special interest to the student. Reading and research may be done only in the major field of study.

CS 685. Selected Topics II. 3.00

An in-depth study of selected topics not otherwise covered in the regular offerings of the department. May be repeated for credit when course content changes.

CS 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

CS 699. Thesis Continuance 1.00

Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

CS 700. Thesis Research. 2.00. - 3.00

This course is graded on a satisfactory/unsatisfactory (S/U) basis.

Continuing Education

CE 501. Special Topics in Continuing Education 1.00 - 3.00

This course is designed to allow exploration of current topics of interest including various trends and issues in a given field of study.

CE 650. Graduate Internship 1.00 - 5.00

Supervised speech-language pathology practicum. Length and frequency of clinical experience determined by CAC and the director of clinical education in accordance with student's clinical needs. Both CSD 683 and CE 650 may be repeated for credit *Prerequisite: CSD 682, permission of head of department and, if in an adult setting, CSD 544.*

CE 850. Professional Internship 1.00 - 5.00

Full-time clinical practicum with limited supervision at clinical settings external to the Communication Sciences and Disorders Speech-Language-Hearing Clinic. This course may be repeated, with permission of the instructor, for up to 6 credits. *Prerequisite: CSD 829, permission of instructor and department head.*

Early Childhood Education

ECED 508. Observation and Study of the Young Child. 3.00

Skills for observing, recording and interpreting the behavior of the young child as a basis for adult intervention and guidance are developed. Laboratory experience is required. *Prerequisite: PSYC 160.*

ECED 510. The Creative Arts in Early Childhood Education. 3.00

This course introduces theory and writing about creativity, and requires critical analysis of theory in terms of application in the early childhood classroom. Students plan, implement and evaluate activities in music, literature and the visual arts that are consistent with creativity theory.

ECED 511. Early Childhood Practicum with Attention to Diversity. 3.00

This practicum provides a setting for observations and experiences in ECED classrooms and in the guiding and teaching of young children including those whose cultures or languages represent diverse family contexts. The accompanying seminar provides opportunities for activities and discussion related to PreK-3 classrooms and accompanying texts. *Corequisite: LED 566.*

ECED 512. Facilitating Children's Natural and Social Science Constructions. 3.00

Study of the history, content, processes, teaching methods and materials for teaching natural and social sciences in Pre-K to 3rd grade. Focus is on constructivist learning theory, levels of inquiry, and national and state standards as applied to the selection of content, method and learning equivalent.

ECED 544. Children and Mathematics in Grades PreK-3. 3.00

This course provides students with the knowledge, skills and understandings to design and implement effective mathematics programs in PreK-3 grades. Focus is on appropriate mathematics content, teaching strategies and curriculum materials from a developmental perspective.

ECED 609. Constructivist Curriculum Design and Evaluation. 3.00

Theories and practices in the design, implementation, and evaluation of curriculum for pre-kindergarten and kindergarten through third-grade children are examined with an emphasis on development through play.

ECED 611. Early Childhood Practicum with Attention to Special Education. 3.00

This practicum provides a setting for observations and experiences in ECED classrooms and in the guiding and teaching of young children including those with special needs. The accompanying seminar provides opportunities for activities and discussion related to PreK-3 classrooms including those whose abilities require accommodations and adaptations.

Prerequisite: ECED 511. Corequisite: LED 636.

ECED 632. Inquiry in Elementary Education. 3.00

Focus on inquiry as the basis for learning, philosophical foundations of qualitative and naturalistic methodology and instruction in the use of qualitative methods in the study of education and to inform practice.

ECED 641. Working with Parents of Young Children. 2.00.

Study of the role of the teacher in early childhood education 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 the community are examined. *Prerequisite: ECED 632. Corequisite: ECED 690.*

ECED 680. Reading and Research. 3.00

Directed reading and research in areas of student interest. Reading and research may be done only in the major field of study. A plan of study must be submitted in prescribed form and approved prior to registration for the course. *Prerequisite: EDUC 630 or equivalent and written permission of the adviser and department head.*

ECED 690. Student Teaching Internship in Early Childhood Education. 6.00

Student teaching provides a context in which to demonstrate and integrate the skills, knowledge and dispositions that are essential for success as a classroom teacher. Under the guidance of a university supervisor students are expected to reflect on the teaching role as they assume the full responsibilities typical of teachers in grades PreK-3 *Prerequisite: ECED 508, ECED 510, ECED 511, ECED 512, ECED 544, ECED 609 and ECED 611; LED 566 and LED 636; ELED 632. Corequisite: ELED 641.*

Education

EDUC 501. Workshop in Education 1.00 - 3.00

Workshop experience relative to the current needs evident in elementary and secondary school programs. No more than six credit hours earned in workshops in education may be applied to a major program in education or no more than three hours may be applied to a minor program in education.

EDUC 525. Cross Cultural Education. 3.00

The course provides students with knowledge of the effects of socio-cultural variables in an instructional setting.

EDUC 540. Educational Technology. 3.00

Develops concepts and skills related to educational technology including selecting, producing, evaluating and using traditional forms of media and newer information technologies, including computers and videodiscs, to enhance delivery of instruction.

EDUC 620. Changing Contexts of American Schools. 3.00

This course focuses on the nature of educational change in American schooling. Emphasis will be placed upon contemporary issues facing education, their historical and philosophical roots and the implementation of educational change.

EDUC 625. Evaluation in Education. 3.00

The course is designed to help practicing educators improve their development and use of assessment tools and techniques. Attention will also be given to analyzing and interpreting assessment results and investigating newer developments in the evaluation of learning and instructional programs. *Prerequisite: An instructional methods course.*

EDUC 630. Inquiry in Education. 3.00

The purpose of this course is to help the student develop skills, insights and understandings that will enable her or him to become an intelligent and critical customer of educational inquiry and a productive participant in the inquiry process. *Prerequisite: Appropriate technology skills or EDUC 505 ; educational technology students must first take LTLE 560 and LTLE 570.*

EDUC 631. Seminar in Educational Inquiry 1.00

Studies of topics related to educational inquiry. Emphasis on inquiry designs and skills specific to students' areas of inquiry interests. *Prerequisite: EDUC 630. This course is graded on an S/U basis.*

EDUC 633. Seminar in Inquiry 1.00 - 3.00

This seminar will allow graduate students to discuss their learning environment based inquiry projects. They will problem solve issues that arise in the implementation of their projects as well as analyze data and draw appropriate conclusions from their findings. From those conclusions, they will generate implications for and connections to their reading.

Prerequisite: Admission to The Graduate School.

EDUC 641. Learning Theories and Practice. 3.00

This course focuses on the theories and research that guide the understanding of diverse learners, processes of learning and development, the role of the teacher, the design and delivery of instruction, the processes and strategies of teaching, and research-based decision-making.

EDUC 642. Curriculum Theory and Issues. 3.00

Curriculum theory and issues focus on the historical, philosophical, sociological and political perspectives involved with decisions about teaching and learning. Reflection on purposes, content, design and assessment of educational programs form the core of curriculum studies.

EDUC 660. Facilitating Experiential and Action Learning. 3.00**EDUC 675M. Internship in Middle School Foreign Language Instruction. 4.00.**

Participants will experience the full range of conditions and tasks expected of a teacher for students in grades 6-8 during an eight-week internship. They will be expected to develop and demonstrate competencies in teaching with the supervision and support of experienced teachers. Students must register for both EDUC 675M and EDUC 675S during the same semester for a total of eight credits. *Prerequisite: Admission to Teacher Education, admission to the MAT program and completion of all other MAT program course work including MSSE 570. Corequisite: MSSE 650.*

EDUC 675S. Internship in Secondary School Foreign Language Instruction. 4.00.

Participants will experience the full range of conditions and tasks expected of a teacher for students in grades 9-12 during an eight-week internship. They will be expected to develop and demonstrate competencies in teaching with supervision and support of experienced teachers. Students must register for both EDUC 675M and EDUC 675S during the same

semester for a total of eight credits. *Prerequisite:* Admission to Teacher Education, admission to the MAT program and completion of all other MAT program course work including MSSE 570. *Corequisite:* MSSE 650.

EDUC 680. Reading and Research. 3.00

Opportunities for directed reading and research in areas of special interest. Reading and research may be done only in the major field of study. *Prerequisite:* EDUC 630 or equivalent, and written permission of the adviser and program coordinator.

EDUC 682. Professional Development, Partnership and Advocacy. 3.00

Introduction of professional development offered by associations, professional organizations and higher education. Strategies for building partnerships with colleagues, families and communities are practiced. Advocacy for students' linguistic, academic, and personal development is addressed. Students discuss public issues affecting the education of majority and minority students and develop the skills to support students and their families socially and politically. *Prerequisite:* Student teaching/internship.

EDUC 698. Comprehension Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

EDUC 700. Thesis Research. 6.00

This course is graded on a satisfactory/unsatisfactory (S/U) basis.

Elementary Education

ELED 501. Special Topics in Elementary Education. 3.00

This course is designed to allow elementary education teacher candidates to explore issues in education that particularly interest them. Special topics will be designed by faculty that reflect current issues and problems in education. Students will choose the topic that meets their needs. *Prerequisite:* ELED 411 or permission from instructor.

ELED 510. Creativity and the Arts in Elementary Education. 3.00

This course examines theories related to the development of creativity and their application to classroom instruction. In addition students will study and practice ways to integrate a wide variety of expressive arts (music, poetry, painting, drama, dance, etc.) into the elementary education curriculum.

ELED 533. Children and Mathematics II: Data, Chance, and Space. 3.00

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:* MATH 207, ELED 411 and admission to The Graduate School.

ELED 570. Planning, Instruction and Assessment in the Elementary Education Curriculum. 3.00

Elementary education teacher candidates will learn processes 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 utilizing active engagement strategies for an inclusive environment of diverse students. Students will gain knowledge and skills necessary to use assessments to inform instructional decision-making. *Prerequisite:* ELED 432, ELED 433, ELED 434 and READ 436.

ELED 621. Practicum with A Focus On Inquiry. 2.00.

This field experience encourages candidates' construction of knowledge through the design and implementation of formal inquiry regarding practices in elementary education. The implementation and refinement of teaching practices essential for creative, child-centered, content-rich and culturally sensitive teaching will be examined throughout the practicum and accompanying seminar.

ELED 622. Seminar in Inquiry 1.00

This seminar will allow graduate students to discuss the efforts of their inquiry projects. They will problem solve issues that arise in the implementation of their projects as well as analyze data and draw appropriate conclusions from their findings. From those conclusions, they will generate implications for and connections to their teaching. *Prerequisite:* Admission to The Graduate School, *Corequisite:* ELED 621.

ELED 632. Inquiry in Elementary Education. 3.00

Focus on inquiry as the basis for learning, philosophical foundations of qualitative and naturalistic methodology and instruction in the use of qualitative methods in the study of education and to inform practice. *Prerequisite:* For M.A.T. ECED: ECED 508 and ECED 511, LED 566, ECED 512 or ECED 544.

ELED 633. Seminar in Education Inquiry 1.00

Focus on the application of education inquiry and its application to teaching. *Prerequisite:* ELED 632. *Corequisite:* For M.A.T. ECED: ECED 690

ELED 641. Families, Schools, and Communities. 2.00.

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:* ELED 411 and admission to The Graduate School.

ELED 690. Internship in Teaching. 4.00.

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 teacher in grade PreK-6. *Prerequisite:* Admission to The Graduate School. *Corequisite:* ELED 641

English

ENG 512. Special Topics Seminar. 3.00

Cross-listed with 400-level courses, for graduate credit. Additional academic work required of graduate students. Registration requires a proposal and permission of the Graduate Coordinator and the faculty member teaching the course. May be repeated twice only for credit when content varies.

ENG 600. Research Methods. 3.00

Introduction to research and writing in the discipline for beginning graduate students. Advanced training in research methods and citation, in critical analysis and scholarly writing, and in disciplinary history and the workings of the academy. Required for all Master of Arts students in their first semester.

ENG 602. Contemporary Critical Theory. 3.00

Advanced study of the major debates in current critical discourse, covering such topics as formalism, structuralism, deconstruction, Marxism, new historicism, cultural studies, feminist and queer studies, postcolonial and race studies, and post-humanism.

ENG 605. Professional Seminar in College Composition. 3.00

Practical examination of the content and methodology of freshman English (GWRIT 101, 102) for the training of beginning teaching assistants. (Required for all beginning teaching assistants; open informally on a noncredit basis for new part-time faculty in the department.)

ENG 608. Textuality. 3.00

A study of material textuality and literary production. Topics may include manuscript and print culture, the History of the Book, bibliography, the history of commercial publishing,

periodical studies, graphic novels, historical lexicography, and post-print textual practice. Topics may be determined by period or geography, culture or politics, theme or genre. May be repeated when content varies.

ENG 610. Studies in Gender and Sexuality. 3.00

An examination of literature through the lens of contemporary theories of gender and sexuality. May be repeated when content varies.

ENG 612. Topics in Theory and Cultural Studies. 3.00

Advanced readings in contemporary critical or linguistic theory or in cultural studies that are focused by topic, period, culture, or theme. May be repeated when content varies.

ENG 615. Studies in Medieval Literature. 3.00

Medieval literatures in the original or in translation produced between ca. 500-1475 in England, Iceland, Scandinavia, the European continent, and the Middle East. Topics may be determined by period or geography, culture or politics, theme or genre. May be repeated when content varies.

ENG 620. Studies in Renaissance and Early Modern Literature. 3.00

British literature of the Renaissance and Early Modern periods (1476-1660). Topics may be determined by period or geography, culture or politics, theme or genre. May be repeated when content varies.

ENG 630. Studies in Restoration and 18-Century British Literature. 3.00

British literature from ca. 1660 to 1800. Topics may be determined by period or geography, culture or politics, theme or genre. May be repeated when content varies.

ENG 640. Studies in 19-Century British Literature. 3.00

British literature of the 19th century. Topics may be determined by period or geography, culture or politics, theme or genre. May be repeated when content varies.

ENG 645. Studies in 20th-And-21st-Century British Literature. 3.00

British literature of the 20th and 21st centuries. Topics may be determined by period or geography, culture or politics, theme or genre. May be repeated when content varies.

ENG 650. Studies in Early American Literature. 3.00

Authors from the seventeenth and eighteenth centuries.

ENG 651. Studies in 19th-Century American Lit. 3.00

American literature of the 19th century. Topics may be determined by period or geography, culture or politics, theme or genre. This course may be repeated when content varies.

ENG 662. Studies in 20th-And-21st- Cent Lit of the United States. 3.00

American literature of the 20th and 21st centuries. Topics may be determined by period or geography, culture or politics, theme or genre. May be repeated when content varies.

ENG 668. Studies in African Literature. 3.00

Literatures of Africa in translation. Topics may be determined by period or geography, culture or politics, theme or genre. May be repeated when content varies.

ENG 671. Studies in South Asian Literature. 3.00

Non-U.S., non-British literature in English or in translation. Topics may be determined by period or geography, culture or politics, theme or genre. May be repeated when content varies.

ENG 672. Studies in African American Literature. 3.00

African-American literature of the 20th and 21st century in the context of the cultural and intellectual currents of the period. Topics may be determined by period or geography, culture or politics, theme or genre. May be repeated when content varies.

ENG 675. Reading and Research. 3.00

Supervised reading and research in a particular topic or field. Admission by permission of the director of graduate studies. May not be repeated.

ENG 698. Comprehensive Continuance 1.00

Continued preparation for the comprehensive examinations. May be repeated as needed.

ENG 699. Thesis Continuance. 2.00.

Continued study, research and writing for the thesis. May be repeated as needed.

ENG 700. Thesis Research. 3.00

Six credits taken over two consecutive semesters. Graded on a satisfactory/unsatisfactory (S/U) basis.

Exceptional Education

EXED 501. Workshop in Special Education. 3.00

Designed to provide an intensive study of a particular topic in special education.

EXED 502. Characteristics of Learners with Disabilities Accessing the General Curriculum. 3.00

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.

EXED 503. Application of Educational Technology for Students with Disabilities 1.00

An introduction to instructional technology for persons with disabilities. The role of assistive technology in the educational process is investigated. Federal and state guidelines, interdisciplinary team functioning, and program as well as equipment selection are addressed.

EXED 504. Literacy Acquisition & Development: Specialized Reading Instruction for Special Needs Students. 3.00

The content of this course will focus on the acquisition and development of reading skills for students with disabilities. Content will include: Characteristics of students with reading disabilities; informal assessment strategies, the relationship of oral language to reading; stage-development of reading skills; research-based instructional methods; principles of specialized reading instruction; scientifically-based reading programs for students with disabilities; and collaboration with parents to enhance students' reading skills.

EXED 505. Service Delivery in Early Childhood Special Education. 3.00

This course offers the student detailed experience in the numerous ways in which educational services are made available to children with disabilities, ages 0 to 5. Particular emphasis is placed on working cooperatively with parents in the development of the IEP and IFSP. *Prerequisite: Permission of instructor.*

EXED 506. Overview and Assessment of Autism Disorders. 3.00

This course is designed to provide an overview of the current issues involved in working with children who have been identified as having a disability on the autism spectrum. Areas addressed will include learning characteristics, current research and factors involved in causation, assessment and diagnosis. We will briefly 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-depth in subsequent courses. A range of instructional methodologies and techniques will be emphasized throughout the course.

EXED 507. Special Education and Collaboration

This course is designed to provide special education teachers the skills necessary to be collaborative colleagues and advocate for their students with disabilities. The content of the course includes examining the role of collaboration across educational settings and providing knowledge on instructional methods that will allow the special education teacher to be a strong collaborator and advocate for all students with disabilities.

EXED 508. Nature and Issues of Exceptionalities. 3.00

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 exceptionalities, legislative and judicial mandates and current regulation related to individuals with exceptionalities will be stressed. The role of culture, environment, family education, and government on exceptionalities will be explored.

EXED 509. Nature and Issues of Severe Disabilities. 3.00

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.

EXED 510. Systematic Behavioral Interventions. 3.00

An application of various systematic behavioral interventions to the management of behavior and learning of individuals with disabilities. Approaches to teaching social skills are also addressed.

EXED 512. Behavior Management in the Classroom. 3.00

An application of behavior modification techniques to the control of discipline problems in the classroom. The use of these principles as an aid in learning is also stressed.

EXED 520. Differentiation of Instruction and Assessment to Meet the Needs of Diverse Learners. 3.00

This course is designed to explore and address the instructional and assessment needs of students with diverse learning needs in the general curriculum classroom. Focus will be on identifying, prioritizing, using and monitoring instructional and assessment opportunities that are differentiated for diverse learners will be covered. Students will also learn to consider student learning characteristics when making differentiation decisions.

EXED 530. Characteristics of Students with Visual Impairments. 2.00.

This course addresses the nature and issues of visual impairments. It covers overview characteristics of and services to persons with visual impairments, including the impact of visual impairment on infant/child growth and development, child/adolescent social emotional development, and family interaction patterns. It provides a framework for considering the educational, conceptual, psychosocial, and physical implications of a vision impairment. Course delivery in distance education format.

EXED 531. Assistive Technology for Individuals with Sensory Impairments. 3.00

This course focuses on 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. Access and evaluation issues related to the use of assistive technology for individuals with sensory impairments will be explored. *Prerequisite: EXED 530. Corequisite: EXED 530.*

EXED 532. Braille Code. 3.00

This course provides instruction in the development, use, application, and evaluation 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, and develop the competencies for designing related instructional methodologies for teaching children who are blind to read and write. Students will demonstrate skills in assessing appropriate use of Braille code and Braille curricula. This course is delivered via an online education format. *Prerequisite: EXED 530. Corequisite: EXED 530.*

EXED 533. Orientation and Mobility. 2.00.

This course provides the foundation for analyzing the components and essence of orientation and mobility. It establishes how the need for independent travel by individuals with visual impairments created the field of O&M; explores the philosophy and history of orientation & mobility including cane instruction, dog guides and methods of travel; and addresses techniques in developing orientation skills and basic mobility instruction. Motor and concept skill development are emphasized. This course is delivered via a distance education format. *Prerequisite: EXED 530. Corequisite: EXED 530.*

EXED 534. Curriculum and Assessment of Students with Visual Impairments. 3.00

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, planning, and evaluating the educational programs for students with visual impairments. Also covered in this course are assessment technologies for students with visual impairments; determination of learning needs and appropriate learning media; and the relationship of assessment, IEP development, and placement in working with individuals, their families, and educational and service providers. This course is delivered via a distance education format. *Prerequisite: EXED 530. Corequisite: EXED 530.*

EXED 560. The Nature and Needs of Gifted Learners. 3.00

This course emphasizes the developmental nature of gifted learners and their related learning characteristics and needs. The origins and nature of varying conceptions of giftedness are explored in relationship to appropriate educational services via the differentiated education for gifted learners. This course introduces the historical and theoretical foundations of gifted education.

EXED 565. Instructional Methods in Gifted Education. 3.00

The course content includes an understanding of both the theoretical and practical implementation of the appropriate instructional approaches for gifted learners. Adaptations and modifications to general methods and strategies will be included. Emphasis will be placed on the specific instructional strategies that promote appropriate academic rigor and learner independence. This course is designed to be taken by students who will be completing the gifted add-on endorsement. *Prerequisite: EXED 560.*

EXED 570. Practicum in Gifted Education. 3.00

The practicum experience is designed to provide direct experiences with gifted education programming through participation in related services. A planned and coordinated field experience will consist of a minimum of 45 instructional hours of successful teaching experiences with gifted students in a heterogeneously grouped (mixed ability) classroom or a homogeneously grouped (single ability) classroom. *Prerequisite: EXED 560, EXED 565, EXED 660 and EXED 665.*

EXED 584. Methods of Instruction for Students with Moderate/Severe. 3.00

Methods for remediation & adaptation of instruction in academic & 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 (incorporated into this course) provides field experience to practice skills learned in this course. *Prerequisite: EXED 509.*

EXED 600. Instructional Methods in Special Education. 3.00

A detailed study of specialized methods for teaching academic skills to individuals with disabilities. The course emphasizes special education instructional approaches, such as task analysis, direct instruction, diagnostic/prescriptive teaching and strategy training. Focus is on specific remedial methods for reading, math and writing. *Corequisite: EXED 637.*

EXED 601. Collaboration and Supervision to Support Exceptional Learners. 3.00

This course is designed to provide knowledge in consultation, coaching, case management, co-teaching and collaboration with individuals, families, educators, related service

providers and other human service professionals. Service coordination, interagency coordination, models for integration with peers representing diverse skills and abilities, transition facilitation, and training, managing and monitoring paraprofessionals will be studied.

EXED 602. Communication, Language and Sensory Issues of Autism and Students on Adapted Curriculum. 3.00

This course is designed to provide an in-depth study of the current issues involved in working with children who have been identified as having an autism spectrum disorder or working on an adapted curriculum. We will review learning characteristics, current research and factors involved with causation, assessment and diagnosis, and positive behavioral supports to set the stage. We will explore social skill development; sensory processing, motor planning and sensory integration; and communication and language development. We will consider a range of instructional methodologies and techniques for providing instruction, support and generalization of skills in these areas. *Prerequisite: EXED 506 or EXED 509.*

EXED 603. Challenging Behaviors, Positive Behavioral Supports, Functional Behavior Assessment and Behavioral Intervention Plans. 3.00

This course is designed to provide an in-depth look at the behavioral challenges those with a disability in the autism spectrum might have and display. Areas addressed will include behavioral characteristics, current research and factors related to behavioral challenges in this population, positive behavioral supports, Functional Behavior Assessment and Behavior Intervention Plan Development, implementation and monitoring. We will cover data collection in relation to assessment and monitoring behaviors. We will review only briefly 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 instructional methodologies and techniques will be emphasized throughout the course. Prerequisites include the first two courses in the autism certificate program. *Prerequisite: EXED 506 and EXED 602.*

EXED 604. Practical Experience in Autism. 2.00.

This course is designed to provide in-depth practical application of the knowledge and skills acquired during the preceding course work in autism. Students will apply skills in assessment, planning, implementation, and the review and revision of programming specifically developed to address the needs of student learners or clients with a disability along the autism spectrum. Areas addressed can include learning needs, self-care issues, communication and social skills needs, sensory planning, behavioral challenges, positive behavioral supports, Functional Behavior Assessment and Behavior Intervention Plan Development, and overall program implementation and monitoring. Students will collect data, develop lessons and behavioral or self-care plans and work with team members to implement, monitor and revise plans. A range of instructional methodologies and techniques will be emphasized throughout the course. Prerequisites include the three courses in the autism certificate program. *Prerequisite: EXED 506, EXED 602 and EXED 603.*

EXED 605. Trends and Issues in Exceptional Education. 3.00

This course investigates current issues and controversies in the field of exceptional education. This course is designed to support students' understanding of the contributions of history, policy, and research to the current trends and issues affecting the field. It will also challenge students to apply this knowledge to their practice. Topics covered in this course will change as issues surrounding exceptional education change.

EXED 607. Program Development and Planning in Special Education. 3.00

A study of modifications needed in the school curriculum to fit the unique needs of the learners with disabilities. Procedures involved in individualized educational plans, and methods and materials for academic and school-related problems of individuals with disabilities are examined. *Prerequisite: EXED 502, EXED 612 or permission of the instructor. Corequisite: EXED 612 or permission of the instructor.*

EXED 608. Portfolio in Exceptional Education. 2.00. - 4.00

This course provides an opportunity for students to develop a portfolio demonstrating their professional competencies through classroom practices. Portfolio requirements have been aligned with the National Board for Professional Teaching Standards. This course is designed to support students who would like to apply for National Board Certification, but submission of materials to National Board for Professional Teaching Standards for review is not a component of the course.

EXED 609. Research in Exceptional Education 1.00 - 4.00

This course provides students with an opportunity for detailed study of single-subject research designs, the logic behind these designs, and the application of these designs to classroom-based research with all students. *Prerequisite: EDUC 630.*

EXED 610. Practicum in Inclusive Settings. 2.00. - 3.00

This course provides field experience opportunities to practice the skills in differentiating instruction in general education settings developed in EXED 520 and the special education instructional methods developed in EXED 507. *Prerequisite: EXED 520. Corequisite: EXED 507.*

EXED 612. Psychoeducational Assessment of Learning and Behavior Problems. 3.00

A detailed study of psychoeducational assessment procedures and instruments used in determining eligibility, and planning and evaluating instruction for students with mental retardation, specific learning disabilities and emotional disturbance. The course emphasizes administration of formal and informal instruments, interpretation of results, and formulation of individual educational plans based on assessment findings. *Prerequisite: EXED 502 or permission of instructor.*

EXED 613. Teaching Individuals with Learning and Behavior Problems. 3.00

A detailed study of curriculum and methods for teaching individuals with learning and behavior problems. The course emphasizes a task analysis approach to developing academic, personal/social and functional life skills. *Prerequisite: EXED 607.*

EXED 615. Transition of Learners with Disabilities Into New Environments and Functions. 2.00. - 4.00

This course was 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 school, 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. *Prerequisite: EXED 502 and EXED 508 or instructor's approval. Repeatable twice.*

EXED 616. Data-Based Decision Making. 3.00

This course will prepare practitioners to successfully use data-based decision making at the individual, class, and school-wide levels. Specific topics will include: (a) principles of measurement theory; (b) selecting and implementing ongoing progress monitoring with a specific focus on reliable and valid curriculum-based measurement tools; (c) process of using curriculum-based measurement; and (d) using data to make targeted instructional decisions. *Prerequisite: EDUC 630.*

EXED 617. Strategies for Inclusive Classrooms. 3.00

The content of this course will focus on evidence-based strategies for inclusive classrooms. Specific topics covered will include: (a) inclusive classroom models; (b) strategies to increase active student engagement; (c) instructional design principles appropriate for whole-class instruction; (d) peer-mediated learning; and (e) effective modification and accommodation practices. *Prerequisite: EXED 616.*

EXED 618. Evidence-Based Practices. 3.00

This course will focus on issues related to identifying, selecting, implementing, and monitoring the use of evidence-based practices for students who have disabilities or are at risk for academic failure (K-12). Specific topics include: (a) scientifically-based research; (b) access to evidence-based practices and programs; (c) analysis of practices and curricula across content areas, grade levels, and disability characteristics; (d) implementation of evidence-based practices *Prerequisite: EXED 616.*

EXED 620. Behavioral Assessment. 3.00

This course introduces basic concepts, methods, and applications of behavioral assessment, and is designed to meet the following criteria on the BACB task list: sections A (Measurement), G (Identification of the Problem), and I (Assessment). Direct and indirect measurement will be covered extensively. Students will be expected to perform both types of measurements with students/clients in a clinical assignment.

EXED 621. Issues and Trends in Early Childhood Education. 3.00

This course is designed to provide the student with an introduction to educational programming for children with disabilities, ages 0 to 5. Particular attention is given to federal legislation, state procedures and practice, and the status of children served in early childhood special education and early intervention programs.

EXED 622. Assessment in Early Childhood Special Education. 3.00

This course provides a student with exposure to screening, assessment, and diagnostic procedures used in the identification of children with disabilities, ages 0 to 5. A case study approach to diagnosis is emphasized. Family assessment is also an integral part of the course. *Prerequisite: Permission of instructor or EXED 502.*

EXED 623. Programming in Early Childhood Special Education. 3.00

This course is designed to acquaint students with curriculum, methods and materials related to establishing and maintaining programs for children with disabilities, ages 0 to 5. Attention is directed to designing developmentally appropriate environments in a variety of settings. *Prerequisite: Permission of instructor or EXED 622.*

EXED 625. Medical and Technological Aspects of Working with Children with Significant Medical Needs. 3.00

This course is designed to give the special educators exposure to working with children (birth through 21) who have disabilities that include significant medical issues. The role and function of special educators as team members are addressed. The role of related technology will receive extensive attention, as will issues of etiology and remediation. *Prerequisite: EXED 508.*

EXED 626. Practicum: Infants and Toddlers with Disabilities. 3.00

This is the introductory field experience with infants and toddlers with disabilities. Settings include medical centers, rehabilitation facilities and community-based programs. Students are expected to demonstrate competencies which have been developed in early childhood special education courses. *Prerequisite: EXED 623. Corequisite: EXED 623.*

EXED 627. Practicum: Early Childhood Special Education. 3.00

This is the introductory field experience with children with disabilities, ages 2 to 5. Settings include medical centers, rehabilitation facilities and community-based programs. Students are expected to demonstrate competencies which have been developed in early childhood special education courses. *Prerequisite: EXED 623. Corequisite: EXED 623.*

EXED 631. Medical and Educational Implications of Visual Impairments. 3.00

This course provides an introduction to anatomy and physiology of the visual system and the educational implications of visual pathology. Topics include anatomy of the human eyes, normal visual development, pathology of the eye, examination procedures for the identification of visual pathology, and the effects of pathology on visual learning and development. This course is delivered online. *Prerequisite: EXED 530.*

EXED 632. Braille Reading and Writing. 3.00

This course provides basic instruction on transcription of advanced Braille codes, including: music, foreign language, chemistry, computer Braille, and Nemeth Code (Braille math code). It introduced techniques for teaching skills in each code. It explores technology tools to create Braille and tactile materials in addition to other assistive technologies used for instruction in math and science. This course is delivered via a distance education format. *Prerequisite: EXED 530 and EXED 532.*

EXED 633. Teaching Methods for Students with Visual Impairments. 3.00

This course emphasizes methods of teaching compensatory skills, the core curriculum, and technology for use by students who are blind and visually impaired. It addresses curriculum development, adaptations, and teaching methodology for individuals with visual impairments. It provides information on adaptations within various educational programs and adaption of general education classroom materials and procedures for use by children and youth with visual impairments. This course is delivered online. *Prerequisite: EXED 530.*

EXED 634. Curriculum and Assessment of Students with Visual Impairments. 3.00

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, planning and evaluating the educational programs for students with visual impairments. Also covered in this course are assessment technologies for students with visual impairments; determination of learning needs and appropriate learning media; and the relationship of assessment, IEP development, and placement in working with individuals, their families, and educational and service providers. This course is delivered via a distance education format. *Prerequisite: Prerequisite or corequisite: EXED 435/EXED 530.*

EXED 636. Practicum in Behavior Intervention Methods 1.00 - 3.00

This course is designed to allow students to practice the basic applied behavior analysis (ABA) methods. This is designed to be taken repeatedly as the students move through the Behavior Specialist MED program and develop their ABA skills.

EXED 637. Practicum in Remedial Elements of Special Education. 3.00

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. *Corequisite: EXED 613*

EXED 638. Practicum in Special Education Adaptive Curriculum 1.00 - 3.00

This practicum experience is designed to allow students to have experiences working with special education students who are working in an adaptive curriculum.

EXED 650. Student Teaching in Special Education. 3.00 - 6.00

Advanced, supervised teaching experiences in the areas of learning and behavior disorders enabling the student to develop and apply the knowledge, management, instructional skills and professional dispositions acquired in previous course work and relevant field experiences. Students will receive developmental and evaluative feedback. Course graded on an S/U basis and may be repeated for credit. *Prerequisite: Permission of instructor.*

EXED 653. Internship in Special Education: Non-Teaching. 3.00 - 6.00

A supervised non-teaching experience in a setting related to populations with disabilities in order to provide the student the opportunity to demonstrate competencies developed in previous course work. *Prerequisite: Permission of instructor.*

EXED 660. Curriculum Design in Gifted Education. 3.00

The course content includes the design and development of differentiated curriculum for gifted learners. The emphasis of the course is the adaptation and modification of existing curricula, as well as how to design new curricular materials for gifted learners. Content includes making decisions about the suitability of curricular materials for gifted learners. This course is designed to be taken by students who will be completing the gifted add-on endorsement. *Prerequisite: EXED 560, EXED 565.*

EXED 665. Trends and Issues in Gifted Education. 3.00

The course content focuses on the seminal and current issues related to the recognition and education of giftedness in individuals from birth through the life span. Participants will examine the critical issues facing the field of gifted education as well as future directions. This course is designed to be taken by students who will be completing the gifted add-on endorsement. *Prerequisite: EXED 560, EXED 565.*

EXED 670. Professional Practice Seminar for Special Education 1.00 - 3.00

Designed to accompany EXED student teaching. Provides opportunity to reflect on skills, problem-solve school and classroom experiences, increase awareness of the need to continue career-long learning, discuss linkages between program coursework and student teaching experience, explore skill level and plan for on-going professional development. Seminars have differentiated content designed to link with the curriculum being covered in that semester, as well as to the student teacher's experience. *Prerequisite: EXED 605 or permission of the department. Repeatable twice. Corequisite: EXED 650.*

EXED 680. Reading and Research 1.00 – 6.00

Provides the opportunity for directed reading and research in a student's area of concentration. This activity must be done in the major field of study. May be repeated for credit.

Prerequisite: Permission of adviser and program coordinator.

EXED 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

EXED 700. Thesis Research. 3.00 – 6.00

This course is graded on a satisfactory/unsatisfactory (S/U) basis.

Geography

GEOG 501. Workshop in Geog. 3.00

Geology

GEOL 501. Topics in Geol. 3.00

Graduate

GRAD 597. Continuance 1.00 – 3.00

To remain in good standing in their program, all graduate students must maintain continuous enrollment each semester in their program from entry until graduation. This course allows those students who are not intending to register for any other courses during the current semester to continue in their program in good standing. Course may be repeated as needed.

Health Sciences

HTH 645. Practicum in Health Sciences 1.00 – 3.00

Selected practicum experiences for students in the various health sciences graduate programs.

HTH 659. Health Care Environment. 3.00

This is a survey course examining the U.S. health care system, federal and state health policy, and public and private providers. Comparisons of the U.S. system will be made with other systems in the industrialized world.

HTH 680. Reading and Research. 3.00

Directed reading in designated areas of specialized interest. Investigating, researching and reporting. Course may be repeated for credit, with permission of the department head, when content changes.

HTH 685. Field Work in Health. 3.00 – 6.00

Practical experience in applying health theory to problems encountered in a professional setting. Specific assignments will be determined by the needs of the student. (Amount of credit will be based on amount of experience acquired. No more than six hours can be counted toward a degree program.)

HTH 692. Health Policy for Practice and Advocacy. 3.00

This course addresses the foundation of health policymaking. It emphasizes policy analysis for interprofessional practitioners in leadership roles. Federal and state policy-making and the mechanisms for health policy change are emphasized. Policy issues impacting health delivery will form the basis for the development of critical understanding of policy development.

HTH 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

History

HIST 502. Workshop in Colonial American Life. 3.00

This workshop is a study of life in colonial Virginia. Through the use of primary and secondary sources, the students research an aspect of Virginia culture and society. A week of the course is in Williamsburg, Virginia. Graduate students are expected to lead research groups and demonstrate knowledge of secondary literature of the period.

HIST 503. Workshop in Civil War Virginia. 3.00

This workshop examines the impact of the Civil War upon Virginia and her citizens. It explores the secession crisis, tactical and technological developments, and the evolution into "hard war." A four-day battlefield tour will reinforce ideas discussed in the classroom. Students must demonstrate command of the historiography and key primary sources.

HIST 511. Colonial America. 3.00

An interpretative survey of England's mainland colonies from 1558-1776, with special attention to the evolution of the first British empire, historiography and important primary sources.

HIST 520. U S History, 1763-1800. 3.00

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. Particular emphasis is placed upon historiography and analysis of primary sources as reflected through class discussion, oral presentations and writing assignments.

HIST 522. U S History, 1789-1848. 3.00

An interpretative study of the political, economic, social, intellectual and cultural history of the United States from the ratification of the Constitution through the Mexican-American War. Particular emphasis placed upon historiography and analysis of primary sources as reflected through class discussion, oral presentations and writing assignments.

HIST 525. Civil War & Reconstruction. 3.00

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. Students must demonstrate command of the historiography and key primary sources.

HIST 528. American Workers in the Industrial Age 1877 – 1948. 3.00

This course undertakes a critical examination of the impact of industrialization, race and gender, consumerism, the New Deal, and two world wars on the lives of American workers and their unions. Students will learn the major historiographical problems in American labor history and develop a mastery of the secondary literature.

HIST 530. The Gilded Age. 3.00

An interpretative study of U.S. history from the conclusion of the Civil War until the assassination of William McKinley, with special emphasis on industrialization, urbanization, western and overseas expansion, early reform movements and politics. Students will address historiography and examine primary sources.

HIST 531. Reform, World War and Prosperity. 3.00

An interpretative study of U.S. history from the rise of Theodore Roosevelt through the 1920s, with a focus on the progressive reform movement and the problems and issues

generated by the Nation's emergence as a world power and an industrial urban society. Emphasis is placed on command of historiography and analysis of primary source material.

HIST 532. Depression, War and Cold War: U.S. History, 1929-1961. 3.00

An interpretive study of US history from the onset of the Great Depression in 1929, through the inauguration of John F. Kennedy in 1961. The analysis of historical texts, historiography of major figures and seminal events, and interpretation of major debates and historiographical trends will be emphasized in this seminar.

HIST 533. Reform, Upheaval and Reaction. 3.00

An interpretive study of US history from the inauguration of John F. Kennedy in 1961 through the present. The analysis of historical texts, historiography of major figures and seminal events, and interpretation of major debates and historiographical trends will be emphasized in this seminar.

HIST 540. The History Museum. 3.00

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 543. Modern American Technology and Culture. 3.00

This graduate seminar focuses on the historiographical issues in the broader field of the history of technology as well as the theoretical and conceptual frameworks used by historians to examine the interplay between technology and culture. Typically, this course examines the major events, themes, individuals, groups and issues associated with, and influenced by, the rapid technological changes in the United States from the 1870s to the present.

HIST 563. Tudor-Stuart England. 3.00

A study of the economic, intellectual, political and religious development of the English people from 1485-1714 with particular focus on the constitutional struggles of the period. The analysis of historical texts, historiography of major figures and events, and interpretation of major debates and historiographical trends will be emphasized.

HIST 564. Renaissance & Reformation. 3.00

A study of high medieval civilization as an introduction to the history of modern Europe. Attention is given to the Italian and northern renaissance, the fragmentation of western Christendom, the intellectual impact of Luther and Calvin on western thought, and the structure of Tudor despotism in England.

HIST 566. The Family, 1400-1800. 3.00

Detailed analysis of the bibliography, methods, substance and interpretations of family history in Europe and America. Emphasis will be on sources, structure, patterns of change and continuity, and stages of family life to the Industrial Revolution.

HIST 570. Modern Africa. 3.00

Africa in the 20th century, with emphasis on Senegal, Ivory Coast, Ghana and Zaire. Special attention is given to the legacy of the slave trade and the effects of colonization on independent Africa.

HIST 575. Soviet Russia. 3.00

This seminar covers the period from the Russian Revolution in 1917 to the present. Topics include pre-revolutionary Russia, the revolutions of 1917, civil war, the 1920s Stalinism, World War II, the Cold War, the disintegration, the current situation in the former Soviet states, and the historiographical literature.

HIST 577. Medieval Europe. 3.00

Attention is focused on Europe in the middle ages, with a concentration on social and intellectual aspects and on the development of parliamentary institutions. Students must demonstrate command of the historiographical sources.

HIST 578. Twentieth Century Eastern Europe Since 1914. 3.00

An advanced study of the lands between Germany and Russia from the Baltic to the Balkans. The course covers the collapse of the Central European empires, the birth of independent East European states between the wars, the World War II occupation of the region, the communist era, and the post-communist world. Students will consider primary and secondary sources and must demonstrate command of the historiography.

HIST 590. Special Topics in History. 3.00

Selected topics are studied in depth. Topic and professor offering the course will change with each offering. This course may be repeated when content is different.

HIST 592. American Material Culture. 3.00

Focused readings on material culture studies. Readings explore approaches, theories and methods of various disciplines that utilize material culture as evidence. Emphasis is on persistent themes in material culture studies including regional variation and cultural transfer, identity formation and class issues, consumerism, and ethnicity and acculturation.

HIST 593. Historic Preservation. 3.00

An introduction to the philosophy and technique of historic preservation. Course examines the Secretary of the Interior's 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. Students undertake leadership assignments for architectural field assessments and national register nominations.

HIST 595. Introduction to Archives and Manuscripts. 3.00

A study of the varying philosophical and practical perspectives related to archives and manuscripts processing and administration. Through targeted readings in the professional literature, field trips, and leadership roles in discussions, students will explore topics such as appraisal, acquisition, preservation, access, and contemporary ethical, legal and technological issues. Students will undertake a manuscript processing or administrative project. *Prerequisite: HIST 395 or permission of the instructor*

HIST 597. Genealogical Research and Family History. 3.00

A seminar on the theory and methodology of genealogical research, including the critical evaluation of sources, incisive documentation, online resources and the critical analysis of research findings. The course will require extensive utilization of local and state repositories and engagement with local research topics as well as with personal data. Personal genealogical information should be collected and secured at home before the start of the semester.

HIST 600. Seminar in U.S. History: Early Period. 3.00

A topical approach to the study of early U.S. history. Topics might include Colonial America, the American Revolution, the Market Revolution, Civil War and Reconstruction, American intellectual history or any pertinent topic falling within the pre-1877 period. Topic and professor offering the course will change with each offering. This course may be repeated when content is different. See MyMadison for topic and professor.

HIST 601. Workshop in History 1.00 - 3.00

HIST 605. Seminar in U.S. History: Recent Period. 3.00

HIST 610. Seminar of European History: Early Period. 3.00

HIST 637. Practicum: Selected Topics in Local and Regional History. 3.00

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. Topic and professor offering the course will change with each offering. This course may be repeated when content is different. See MyMadison for topic and professor.

HIST 640. Graduate Internship in History. 3.00

Provides students with practical experience in using historical skills in a public or private agency. Periodic student reports and seminars are required. This course may be repeated for credit.

HIST 650. Seminar in World History. 3.00

A topical approach to the study of history in areas aside from Europe and the United States. Topics might include Latin America, modern Japan, modern China, modern Africa, Islamic world or any pertinent topic falling within parameters of concentration. Topic and professor offering the course will change with each offering. This course may be repeated when content is different. See MyMadison for topic and professor.

HIST 653. Patterns of World History. 3.00

This catalog introduces students to the literature, concepts, themes and methodology of world history, a sub-field of history that seeks to compare experiences across regional, area, cultural and temporal boundaries, to look at the cross-cultural interactions and to examine large-scale patterns that have shaped history on a global scale.

HIST 656. The Global Economy and Nationalism. 3.00

The course examines the growth of the global economy since the 14th century. Concentrating on world systems/dependency theory approaches, it investigates the emergence of capitalism, its relationship to modern nationalism, and the role that the concept of development has played in the contemporary organization of nation-states.

HIST 671. Seminar in Historical Research Methods. 3.00**HIST 673. Graduate Research and Writing Seminar. 3.00**

An intensive research and writing seminar focused on the process of conceptualizing, researching, writing and refining historical research papers grounded in primary sources. Emphasis will be on evaluation of sources, interpretation of evidence, refinement of presentation and development of professional standards of criticism. Required of all first year graduate students.

HIST 696. Introduction to Public History. 3.00

The course will provide an introduction to the varied and interdisciplinary "field" of Public History - such as community/local history, historic preservation, archives, historical archaeology, museum studies, business and policy history, documentary editing and publishing, and documentary films - through readings, class discussions, occasional guest speakers, and occasional field trips.

HIST 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

HIST 699. Thesis Continuance 1.00

Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

HIST 700. Thesis Research. 3.00

Inclusive Early Childhood Education

IECE

IECE 600. Teacher as Researcher. 3.00

This course will facilitate students' understanding of the purpose of research, develop a knowledge base of qualitative and quantitative research, recognize the role of research to inform and guide teaching practice for all young children and their families, evaluate research in inclusive early childhood education, and understand the ethics involved in research and practice. *Prerequisite: Permission of the instructor or admission into the graduate program. Corequisite: IECE 612.*

IECE 612. Effective Teaching in Early Childhood Education. 3.00

This course will require students to review principles of curriculum design and assessment, and examine research related to best practice for early childhood settings. Students will apply their understanding of children, curriculum and assessment to develop a systematic approach to planning and assessing learning that is standards based and developmentally appropriate. *Prerequisite: Permission of the instructor or admission into the graduate program. Corequisite: IECE 613, IECE 614, IECE 632.*

IECE 613. Practicum in the Education of Young Children. 3.00

This practicum places students in a setting serving either preschoolers or infants and toddlers. Settings may include home, community, and school based programs. Students will demonstrate their knowledge of typical and atypical development, appropriate learning environments, assessments, and activities, and the importance of play. Students will work directly with professionals and families. *Prerequisite: Permission of the instructor or admission into the graduate program. Corequisite: IECE 612, IECE 614 and IECE 632.*

IECE 614. Individualized Behavior Intervention for Young Children. 3.00

This course provides the student with exposure to and knowledge of various systematic, 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. *Prerequisite: Permission of the instructor or admission into the graduate program.*

IECE 620. Seminar in Inclusive Early Childhood Education Student Teaching. 3.00

This seminar accompanies IECE 680 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 families and other service providers. *Prerequisite: IECE 612, IECE 613 and IECE 614. Corequisite: IECE 680.*

IECE 630. Teacher as Leader. 2.00.

This course examines the role of the inclusive early childhood educator as a leader. Students will discuss and develop knowledge and skills for advocacy, collaboration, ethical behavior, and professionalism. *Prerequisite: IECE 620 and IECE 680.*

IECE 632. Creativity and Play. 3.00

This course allows students to examine play theories, research and creativity in terms of human growth and development. Students will explore pedagogical issues with a focus on all children in the context of formal and informal settings. Students will use play observations and assessment to select appropriate methods and materials to support young children's creativity, play and representations. *Prerequisite: IECE 620 and IECE 680.*

IECE 680. Student Teaching in Inclusive Early Childhood Education. 6.00

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 cooperating teachers, student teachers gradually assume full responsibility as the inclusive early childhood educator. *Prerequisite: IECE 612, IECE 613 and IECE 614. Corequisite: IECE 620.*

Integrated Science and Technology

ISAT 502. Earth Systems and the Sustainability of Natural Resources. 2.00.

A conceptual and descriptive scientific understanding of critical Earth systems and natural resources as they pertain to applied environmental and sustainability management. The course is intended to provide an integrative introductory foundation of knowledge, terminology, models and concepts with respect to the physical, biological and ecological processes

that govern life on Earth; to explore the limits that these processes pose for human natural resource use and recovery; and to illustrate the power of humans to disturb the dynamics that support a living planet. Course is taught online.

ISAT 504. Project Management in A Cross-Cultural Environment 1.00

An introduction to the basic principles of project management and key processes including initiating, planning and scheduling a project. The course also explores work collaboration in cross-cultural environments and international settings, where interpersonal communication, organizational cultures and societal norms can affect productive and collegial project collaboration. Important cultural competencies are explained and practiced. The class is conducted in a blended learning environment that incorporates online tutorials, group work, seminar discussions and guided learning exercises. Taught in Malta.

ISAT 510. Foundations in Integrated Science and Technology. 2.00.

This course introduces the student to the fundamental concepts of applied interdisciplinary science and technology and the methodologies required for using an integrated problem-solving approach in the technical area.

ISAT 511. Quantitative Methods for Systems Analysis 1.00 - 3.00

The course is intended to improve the quantitative skills of certain graduate students. Basic mathematical functions and techniques are reviewed, and linear systems topics and numerical analysis techniques introduced. The course meets in tutorial sessions for lectures, discussion and recitation. Does not satisfy graduation requirements for MS ISAT students.

ISAT 528. Industrial Ecology. 3.00 - 4.00

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. The course addresses various practical topics which are associated with industrial ecology, including life cycle assessment, design for environment and environmentally conscious manufacturing. There are additional requirements for graduate students beyond those for undergraduate students enrolled in this dual-level course.

ISAT 560. Complex Systems and How They Fail. 3.00

This course provides an interdisciplinary study of complex system operation and failure focusing on real-world critical infrastructure (e.g., energy, telecommunications, health) systems functionality and problems. Based on known threats and hazards, cascading failures that can result in unexpected catastrophes are analyzed. Risk concepts and management strategies are examined.

ISAT 564. Integrated Case Study Seminar 1.00

An in-depth exploration of a complex, existing real-world problem using formal case study analysis. Designed to illustrate the interdisciplinary nature of difficult problems and to foster integrated problem-solving through the application of systems thinking and structured problem analysis techniques. Course is taught in a discussion and seminar format.

ISAT 565. Energy Sustainability. 4.00.

This course focuses on the exploration and analysis of case studies in the development of sustainable energy policies and practices around the world, including renewable and non-renewable energy sources and conservation practices. Connections of energy sustainability to other key areas, such as water, air and waste, agriculture and food and coastal resources will be emphasized. Offered in Malta.

ISAT 566. Case Studies in Sustainability: Air and Waste. 2.00.

This course focuses on the exploration and analysis of case studies in the development of sustainable air and waste policies and practices around the world, including air pollution abatement, waste disposal and the interconnection of air and waste. Connections of air and waste sustainability to other key areas, such as water, energy, agriculture and food and coastal resources will be emphasized. Offered in Malta.

ISAT 567. Food Resources and Security. 4.00.

This course focuses on the exploration and analysis of case studies in the development of sustainable agriculture and food security policies and practices around the world, including food safety and land use. Connections of agricultural sustainability to other key areas, such as water, energy, air and waste and coastal resources will be emphasized. Offered in Malta.

ISAT 568. Freshwater Resources Management. 4.00.

This course focuses on the exploration and analysis of case studies in the development of sustainable water policies and practices around the world, including potable water supply and production and water pollution. Connections of water sustainability to other key areas, such as agriculture and food, energy, air and waste and coastal resources will be emphasized. Offered in Malta.

ISAT 569. Conservation Planning. 4.00.

An exploration of biodiversity conservation as an essential element of sustainability. Reviews current state of biodiversity worldwide, highlighting patterns and trends in relation to genetic, species and ecosystem diversity. Options for mitigating the driving forces of biodiversity loss are critically discussed in terms of their feasibility, including the fundamental conservation biology principles that underpin conservation initiatives. In situ and ex situ conservation options, as well as planning strategies for terrestrial and aquatic/marine ecosystems, are addressed. Offered in Malta.

ISAT 570. Telecommunication Systems. 3.00

This course covers the science, technologies and regulation of established as well as emerging telecommunications systems. Included are network design and planning, as well as information and infrastructure security. Student course work will include laboratory experience.

ISAT 571. Interaction Design. 3.00

Processes, principles, tools, models and techniques for designing interactions between humans and digital products and systems. Students will learn through directed reading, design exercises, heuristic design evaluations and empirical studies of designs.

ISAT 580. Readings and Research 1.00 - 3.00

This course will allow graduate and advanced undergraduate students to undertake intensive study of selected topics that are of special interest. May be repeated when content changes. *Prerequisite: Permission of instructor.*

ISAT 610. Social Context of Science and Technology. 3.00

Critical perspectives on the economic and political systems as they affect scientific research and technological activity in the U.S. and the world. Case studies of major public policy debates involving science and technology. Identifying institutional players and their value commitments, describing political relationships among players, and designing dynamic solutions to social context dilemmas.

ISAT 612. Sustainability, Society and Change. 3.00

An introduction to defining principles of environmental management and sustainability in the context of complex coupled social-ecological systems (SES) and the interdependence of people and nature at a variety of nested scales. Through examples, students analyze interactions between humans and their landscapes over time using different SES frameworks and related concepts, including planetary boundaries, resilience, robustness, ecosystem services and panarchy. The crucial role of personal ethical decision-making frameworks will be further analyzed, exploring the moral dimensions of a number of sustainability-related decision-making situations. Offered in Malta.

ISAT 614. Sustainability Policy and Law. 3.00

This course introduces students to the basic principles of international and national environmental law, policy and regulation as it pertains to sustainability. Critical distinctions in environmental policy and sustainability policy are made, and the issues of governance for each are explored. Common problem domains of law and policy are explored, including

externalities and pollution, common pool resources and resource overharvest, and biodiversity loss and landscape functioning. Transboundary environmental problems are addressed in depth. Offered in Malta.

ISAT 620. Introduction to System Dynamics. 4.00.

An introduction of applied systems analysis approach to problem solving in a multidisciplinary context. Applications taken from biotechnology, energy, environment, health, information management and manufacturing. Topics include introduction to systems analysis and its application to social systems, technological systems and systems in nature; systems characterization and optimization; and advanced project management.

ISAT 630. Computer Modeling and Simulation. 3.00

Use of simulation tools to understand and optimize commonly occurring systems in the concentration areas. Development of simulation models, validation of models and use of models to aid decision making. Topics include: applicability and limitations of simulation models; the model-building process; discrete-event models; dynamic models; deterministic and stochastic models; system optimization and validation.

ISAT 632. Analytical Methods and Techniques 1.00 - 3.00

This course enables students to focus in-depth on specialized analytical methods, techniques and instruments involving quantitative and qualitative data analysis, simulation and modeling relevant to scientific, technical and environmental analysis. Students select and complete structured instructional modules from a menu of topics offered by faculty in the degree program; each module is equivalent to 1 credit hour of graduate coursework. Examples of topics include data visualization, environmental impact assessment, survey design principles, advanced applications in GIS, water quality measurement techniques, thermal infrared imaging and so on. Course may be repeated for additional module topics.

ISAT 640. Information and Technology Management. 3.00

This course focuses on the acquisition, representation, storage, retrieval and distribution of data, information and knowledge from both a historical and contemporary perspective. It places special emphasis on IKM technology in science and technology and the information economy, the management of data, information and knowledge as critical enterprise assets. Students will study computer systems as tools for information and knowledge management and examine ethical, legal and social issues in the management of data, information and knowledge, including intellectual property, privacy and security.

ISAT 642. Applications of GIS for Resource Management. 3.00

This course focuses on the use of GIS as a decision support tool in managing natural resources and promoting sustainable development practices. Applications and spatial problem-solving in the areas of energy, air and water, waste management, agriculture and coastal resources are emphasized.

ISAT 652. Regulatory Issues. 3.00

The course will introduce the policy process affecting regulation and deregulation of various industries. Study of the theory behind and the institutional forms of regulation will be supplemented by case studies of specific industries. The course will also look at international politics and trade as they affect regulatory regimes globally. *Prerequisite: ISAT 610.*

ISAT 654. Advanced Technology Management. 3.00

This course will introduce students to methods, tools and techniques for effective management of technology development and application including management of technology within a company; R&D management; Test and Evaluation procedures and metrics; investment strategies; intellectual property issues; fostering entrepreneurialism; managing innovation; and technology transfer. The course will also address managing technology as a tool, e.g., equipment modernization. *Prerequisite: ISAT 640.*

ISAT 655. Technology Assessment. 3.00

This course will introduce students to the theory and methods of technology assessment and transfer. Students will apply techniques such as risk analysis, cost-benefit analysis, forecasting, trend impact analysis and technology sequence analysis to assess the impacts of new technologies on society. In addition, students will study the process of technology innovation, diffusion and transfer in the context of both developed and developing nations. *Prerequisite: ISAT 620.*

ISAT 656. Mediterranean Field Study. 3.00

This course comprises a field trip to one or more sites within the Mediterranean Basin. Selected study areas combine a variety of natural, semi-natural and anthropogenic dimensions, and face several urgent management issues, many of which are also characteristic of the region. Site work combines lectures, hands-on projects and analytical presentations. The experience reinforces techniques for evidence-based policy formation, environmental appraisal and impact assessment techniques, and protected area management, among others.

ISAT 657. Management Information Systems. 3.00

This course examines the organizational and technological foundations of information systems in a production operations setting. Topics include selecting and implementing tools and systems, database management, information integration, production planning and execution systems, supply chain integration and management, and managing system security. *Prerequisite: ISAT 640 or permission of instructor.*

ISAT 658. International Contexts of Science and Technology. 3.00

This course will make students aware of the global nature of scientific and technological decision-making and sensitive to the impact of culture on science and technology issues. The research and development system of the United States is placed in a global context. A comparative study of the R&D systems around the world is done. International technical issues, where solutions transcend political boundaries, are covered.

ISAT 680. Reading and Research 1.00 - 6.00

Opportunity for supervised reading and research in areas of special interest to the student. Reading and research may be done only in the major field of study.

ISAT 690. Capstone Project. 4.00. - 6.00

The required capstone project for all non-thesis graduate students. The project involves an integrated, interdisciplinary approach to an applied problem in the student's area of interest and specialization. Students are expected to demonstrate project management skills, produce a written technical report or analysis, and provide a presentation summarizing the scope and results of their work. The project can be an investigation or development undertaken by the student individually or as part of a larger effort conducted by a project team.

ISAT 697. Thesis Preparation 1.00

The course prepares students for planning and completing their master's thesis. Topics include problem definition, research question, literature review, research methods and thesis planning process. All students draft a thesis proposal. The course must be completed within the first 12 credit hours of the student's program of study. *Prerequisite: ISAT 620 or instructor approval.*

ISAT 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as necessary.

ISAT 699. Thesis or Capstone Continuance 1.00 - 2.00

Continued study, research and writing effort on the thesis or capstone project. Continuance credits carry no credit hour production and do not count toward graduate program requirements. Students who have registered for six hours of thesis/project credit but have not finished must be enrolled in this course each semester until the completed thesis/project has been approved by the student's committee. May be repeated as needed.

ISAT 700. Thesis Research. 6.00

A research thesis with an emphasis in the student's designated strategic area, but integrated with at least one other area. The thesis will report the results of original research undertaken individually by the student. This course is graded on a satisfactory/unsatisfactory/incomplete (S/U/I) basis.

Intelligence Analysis

IA 600. Introduction to Cyber Intelligence: Analysis of Cyber Threats. 3.00

Cyber intelligence (CI) can be viewed from Sun Tzu's (Chinese Military General) perspective of knowing yourself, understanding your enemies and exploiting information for decision making. Students use cyber threat frameworks to develop common vocabulary for technical and non-technical discussions of cyber security with management and technical staff. They identify and apply cyber analytical methodologies (e.g., NIST framework, CI tradecraft, SWOT, tiered threat matrix) to the organization and identify as well as categorize its cyber threat environment. Using the analysis, students design data gathering plans, harvest open source information, analyze diverse data and conduct basic technical as well as strategic analysis of cyber threats and adversaries. Using analytical approaches, students focus on behavioral, cultural and geopolitical aspects of cyber security.

IA 603. Analytical Methodologies and Tools for Cyber Threats. 3.00

Using case studies, this course provides an overview of cyber methodologies based on industry best practices for analyzing cyber threats, assessing an organization's cyber posture and conducting proactive analysis of cyber adversaries to support network defense and decision making. By applying these cyber methodologies, students will have a systematic, threat-driven approach for dealing with the complexity, uncertainty and ambiguous cyber domain. With the increasing volume of diverse, ambiguous and contradictory data sources, students must systematically consider a range of alternative hypotheses and outcomes. These methodologies, developed in the business and intelligence communities, will allow students to explore problems from different perspectives. Methodologies are organized into categories based on their purposes: diagnostic, descriptive, predictive and prescriptive.

IA 605. Networking and Cyber Threats. 3.00

This course enables students to develop broad technical competencies of the current and future technology applications associated with networking, cyber security, databases, and mobility. It supports cyber intelligence courses which involve information gathering and analysis of open source information about cyber threats and adversaries to support managerial decision making. It provides networking foundation for understanding the internetwork environment and functioning as part of a cyber security team. Using lab-based exercises and case studies, the course emphasizes internetworking, security vulnerabilities, ethical cyber security issues and the hacker's lifecycle including major components: reconnaissance, scanning and probing, exploitation, and post-exploitation.

IA 610. Ethical, Legal and Policy Issues in Cyber. 3.00

This course provides an introduction to major ethical, legal and policy issues as well as privacy challenges (e.g., consumers losing control over how their personal information is collected and used) in responding to cyber threat landscape. The course explores the relationship of the issues and provides the opportunity for vigorous discussion and exploration of them. It uses case studies, demonstrations and guest speakers to explore ethics and the federal, state and local legislations and how they influence cybersecurity. It provides the foundation for comparing issues associated with ethics in deciding on a course of action, legislative approaches (e.g., federal and international) and policies. Particular focus is given to ethical and privacy challenges as well as the need for enhanced federal and international collaboration and information sharing.

IA 615. Social Media and Big Data for Global Security. 3.00

This course introduces students to the basic concepts of big data analytics with applications in social media and emphasizes social, legal and ethical issues. Social media is big data that can help an organization to connect with their client base, increase productivity and improve proactive decision making. The course covers characteristics, transparency, ethical/legal issues and methodologies such as diagnostic, descriptive, predictive and prescriptive social media analytics. The course provides the foundation for students to become sensitive to their biases, conducts social media analytics at different levels (e.g., diagnostic and predictive) and generates alternative analysis to support data-driven decision making.

IA 620. Advanced Cyber Intelligence. 3.00

This course involves conceptualization, identification and analysis of an engaging topic in social, technical or behavioral issues associated with cyber threats and adversaries. It provides an opportunity to conduct analysis of a contemporary topic and explore cyber threats in a specific domain (e.g., finance, education, national security, healthcare). This involves working with domain experts to create a cyber intelligence project that integrates concepts covered in this program. The project demonstrates competencies in connecting the dots, conducting open source analysis, thinking critically and trying to identify adversaries' actions based on their motivations, capabilities, activities and geopolitical interests.

Prerequisite: IA 600 and IA 603.

IA 621. Financial Crimes in Cyber Space. 3.00

This course takes a holistic look at financial crimes from a definitional standpoint according to type, the laws in place that govern monetary transactions and property crimes in the United States; global agreements and cooperation in combating financial theft in cyber space; and a thorough examination of the domestic and international law enforcement agencies who investigate and prosecute criminals. *Prerequisite: IA 600 and IA 603.*

Interprofessional Education

IPE 590. Special Topics in Health and Human Services. 0.00 - 4.00

This course involves topics of special interest to graduate students 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.

Kinesiology

KIN 501. Workshop in Kinesiology 1.00 - 3.00

An intensive study of one aspect of kinesiology that is of current concern to physical educators in the field.

KIN 506. Applied Biomechanics. 3.00

A study of biomechanical concepts and applications as they relate to sport and physical activity. Specific attention will be given to the application of biomechanical concepts and principles in the analysis of movement skills. *Prerequisite: KIN 306 or permission of instructor.*

KIN 510. Motor Learning and Development. 3.00

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 511. Technology in Health and Physical Education. 3.00

Addresses technological issues related to education and explores a variety of educational technologies available to enhance the instruction of physical and health education. An action plan for the utilization of educational technologies will be developed.

KIN 512. Instructional Methods in Middle and Secondary Physical Education. 3.00

A detailed study that builds upon the undergraduate instructional methods in physical education with developmentally appropriate teaching and management techniques for middle and secondary physical education. An in-depth review of the theoretical framework of the teaching styles and application of such in a practical setting are vital components.

KIN 513. Professional Issues for Prospective Physical and Health Educators. 3.00

An in-depth examination of current issues and research on teaching and teachers in physical and health education.

KIN 514. Methods in School Health for PHETE. 3.00

An overview and application of methods for teaching health in the school grades 6-12. Teacher candidates will develop skills in planning, instructional methods, classroom management and reflective teaching. To provide for the application of theory a teaching practicum is incorporated within the course.

KIN 515. Special Topics in Adapted Physical Education. 3.00

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 516. Qualitative Analysis of Movement. 3.00

An advanced course that examines the systematic analyses of selected motor skills and human movements. Students will develop observational skills and techniques to detect and correct errors impacting motor performance for a K-12 learner.

KIN 540. Clinical Exercise Physiology I. 3.00

A study of the benefits, risks and strategies for exercise testing and programming for persons with cardiovascular and metabolic disorders. Prevalence, economic ramifications, pathophysiology, clinical manifestations, assessment, pharmacology, potential benefits and risk of exercise, strategies for exercise programming and other relevant topics are emphasized.

KIN 541. Physical Activity Epidemiology. 3.00

The impact of physical activity on health will be examined with epidemiological evidence. This course will cover the principles of epidemiology research and review seminal studies that have led to our current understanding of the relationship between physical activity and health. Students will be able to critique current physical activity recommendations and public health initiatives through an understanding of the evolution and limitations of past and present studies.

KIN 542. Exercise Across the Lifespan. 3.00

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 547. Physiology of Endurance Performance. 3.00

A study of physiological aspects of athletic performance in endurance-based sports. Physiological traits associated with high levels of performance (such as VO₂max, lactate threshold, movement economy) will be discussed, with respect to their influence in specific sport settings. Principles of endurance training methods will also be discussed, with specific application to program planning for athletes. *Prerequisite: An undergraduate course in exercise physiology or permission of instructor.*

KIN 555. Theories and Practices of Weight Management. 3.00

An examination of the physiological, psychological and environmental theories of obesity. Current trends in obesity research are emphasized. Case studies and laboratories are utilized to provide students with practical experience in constructing a weight loss program.

KIN 610. Curriculum Design in Health and Physical Education. 3.00

An advanced study that builds upon the undergraduate elementary curriculum course by focusing on the middle and secondary student, curriculum models, and the development of effective and futuristic physical education units and programs that meet the needs of the populations.

KIN 611. Teaching Diverse Populations in Health and Physical Education. 3.00

The diversity of student populations in schools relates to differences in ability, socioeconomic status, cultural background, race, religious beliefs, sexual orientation and gender. This is an in-depth study of appropriate teaching methods that celebrate diversity and inclusion. Experiences will serve to diminish fears and the perpetuation of stereotypes, and to allow opportunities to plan and implement activities in which all students are challenged and successful.

KIN 612. Analysis of Teaching and Learning. 3.00

An in-depth look at assessing and improving teaching. A systematic approach to improving teaching techniques and assessments of student learning will be discussed and implemented in a practical setting. *Corequisite: KIN 683.*

KIN 640. Clinical Exercise Physiology II. 3.00

A study of the benefits, risks and strategies for exercise testing and programming for persons with respiratory, neuromuscular, skeletal and immunological diseases, as well as psychological disorders. Prevalence, economic ramifications, pathophysiology, clinical manifestations, assessment, pharmacology, potential benefits and risk of exercise and exercise programming strategies are emphasized.

KIN 643. Environmental Exercise Physiology. 3.00

An advanced course in exercise physiology that examines how physiological systems respond and adapt to exercise performed in challenging environmental conditions (i.e. high altitude, diving, heat, cold, and polluted environments). *Prerequisite: KIN 644 and KIN 645*

KIN 644. Metabolic and Cardiorespiratory Aspects of Exercise. 3.00

An advanced course in exercise physiology that examines the acute responses and chronic adaptations of the metabolic, cardiovascular, and respiratory systems. *Prerequisite: An undergraduate course in exercise physiology or permission of the instructor.*

KIN 645. Muscular, Hormonal, and Environmental Aspects of Exercise. 3.00

An advanced course in exercise physiology that examines the acute responses and chronic adaptations of the neuromuscular system, and hormonal and environmental factors that influence the body's response to exercise. *Prerequisite: An undergraduate course in exercise physiology or permission of the instructor.*

KIN 649A. Practicum in Fitness Programs 1.00

A practicum designed to allow students in the adult fitness program to gain experience as an exercise leader, an exercise-testing technician, and in procedures used to prescribe exercise in healthy subjects and patients with chronic disease. *Prerequisite: Permission of the instructor.*

KIN 649B. Practicum in Fitness Programs 1.00

A practicum designed to allow students in the adult fitness program to gain experience as an exercise leader, an exercise-testing technician, and in procedures used to prescribe exercise in healthy subjects and patients with chronic disease. *Prerequisite: Permission of the instructor.*

KIN 649C. Practicum in Fitness Programs 1.00

A practicum designed to allow students in the adult fitness program to gain experience as an exercise leader, an exercise-testing technician, and in procedures used to prescribe exercise in healthy subjects and patients with chronic disease. *Prerequisite: Permission of the instructor.*

KIN 650. Exercise Testing, Evaluation and Prescription. 3.00

An in-depth analysis of preventive and rehabilitative exercise program design, exercise testing, electrocardiography and exercise prescription. *Prerequisite: KIN 644 or permission of instructor.*

KIN 655. Research Techniques. 3.00

Skill in the initiation, conduct and interpretation of research. Laboratory procedures in physical education, recreation, exercise science, and athletics are included as well as historical, philosophical and descriptive methods. Special emphasis is given to laboratory, experimental, field and action research.

KIN 680. Reading and Research. 3.00

Directed reading in designated areas and specialized interests. Investigating, researching and reporting. Course may not be repeated. *Prerequisite: Permission of the instructor.*

KIN 681. Internship in Exercise Science. 3.00 - 9.00

Provides students a practical experience in exercise testing and prescription, program administration and other professional responsibilities in wellness/fitness or clinical exercise physiology. Specific assignment is based on student need. Taken in the final semester of the program. *Prerequisite: Permission of the instructor.*

KIN 683. Secondary Internship in Health & Physical Education. 6.00

A supervised teaching experience at the middle or high school level in both health and physical education settings. Enables the teacher candidate an opportunity to apply effective teaching techniques and innovative forms of instruction and organization at the secondary level. *Corequisite: KIN 612.*

KIN 684. Group and Team Development: Theory, Research and Facilitation. 3.00

An introduction to theory, research and the practical considerations of group and team development. Skill development in leading groups and teams, facilitation and processing.

KIN 697. Directed Research in Kinesiology. 3.00

Advanced research in kinesiology under the direction of a graduate adviser. Course will be graded on an S/U basis. Course may not be repeated. *Prerequisite: KIN 655 and permission of instructor.*

KIN 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed. *Prerequisite: Permission of the instructor.*

KIN 699. Thesis Continuance. 2.00.

Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed. *Prerequisite: Permission of the instructor.*

KIN 700. Thesis Research. 3.00 - 6.00

This course is graded on a satisfactory/unsatisfactory (S/U) basis. *Prerequisite: KIN 655 or equivalent; and, permission of the instructor*

Leadership Studies

LEAD 700. Introduction to Leadership Studies and Ethics. 3.00

A doctoral survey course covering the history, philosophy, theories and concepts of organizational leadership. This course will differentiate between the roles of the manager and the leader and provide the student with the foundations of organizational leadership. This course provides an opportunity to examine pertinent leadership theories, to develop a personal understanding of leadership and to explore the relations of leaders and followers.

LEAD 702. Topics in Leadership Studies 1.00-2.00

Designed to give students an opportunity to complete a brief independent investigation of a leadership topic. May be repeated with a different topic.

LEAD 703. Special Studies in Strategic Leadership. 3.00

In-depth study of a current topic in the field of Strategic Leadership Studies. Content varies depending on the topic and instructor. May be repeated for different special studies.

LEAD 705. Advanced Research Methods in Leadership Studies. 3.00

Focuses on principles of research design and planning in strategic leadership studies at the doctoral level.

LEAD 710. Advocacy for Change Leadership. 3.00

This course is designed to enable students to understand the distinction among civic participation organizations and political advocacy.

LEAD 711. Effective College Teaching. 3.00

This course is designed to present specific theories and strategies for teaching effectively in the university classroom. This course will assist you in showing effectiveness in your teaching from the beginning of your career. This course will give you the opportunity to take the higher-level knowledge and skills from your concentration and apply them to undergraduate teaching/learning situations.

LEAD 730. Advanced Learning Theories and Instructional Models. 3.00

This course focuses on the design, delivery, assessment and supervision of instruction in schools, across schools, throughout the school division and in the community. *Prerequisite: Permission of instructor.*

LEAD 735. Advanced Curriculum Theory and Instructional Issues. 3.00

This course focuses on the determination, development, implementation, assessment and revision of curriculum and its relationship to the design, delivery, assessment and supervision of instruction in schools, across schools, throughout the school division and in the community. *Prerequisite: Permission of instructor.*

LEAD 740. Foundations of Postsecondary Education. 3.00

Encompasses the practice, theory and empirical underpinnings of postsecondary education. Approaches may draw upon cultural, political, economic, historical, social and global aspects.

LEAD 741. Leading Educational Organizations. 3.00

Analyze, apply study of ethics, values and leadership concepts. Apply four ethical paradigms of justice, care, critique and profession. Integrate and apply knowledge of educational laws, personnel supervision and education finance. Analyze change theory as related to cognitive and social processes and apply to school and organizational change. Analyze the impact of personnel motivation, work performance and evaluation on school culture. Evaluate sociopolitical influences on leadership in schools. *Prerequisite: Permission of instructor.*

LEAD 750. Organizational Theory. 3.00

This course provides a broad overview of the field of organizational science and key components that unite and divide the field, drawing upon an overview of various social science disciplines such as organizational development, change, climate and culture. *Prerequisite: LEAD 700.*

LEAD 751. Organizational Behavior and Leadership. 3.00

This course is designed to introduce students to the principles of organizational transactions, internal and external, with a focus on leading organizational change. The course links communication theory and research to effective practices, emerging issues, evaluation and experiential learning opportunities in organizational practice. *Prerequisite: LEAD 750.*

LEAD 752. Organizational Change and Strategic Human Resource Management. 3.00

This course examines the key theories, purposes and roles of organizations in today's world. The main focus is on the design and structure of organizations based on their mission, environments, complexity, size and span. Differences between public, private and governmental organizations are examined. Organizational culture and its effect on ethics, change leadership and innovation are studied. Designing for performance, sustainability and innovation are foci of this course. *Prerequisite: LEAD 750.*

LEAD 753. Research in Organizational Leadership. 3.00

This course focuses on principles of research design and planning in organizational science and leadership. Students will conduct a defensible research topic, research plan, data collection, selection of methodology and implications. *Prerequisite: PSYC 605, PSYC 606, PSYC 608 and LEAD 754.*

LEAD 754. Strategic Leadership Decision Making. 3.00

This doctoral level course is designed to develop organizational leaders' practices related to and theoretical understanding of policy, accountability and assessment in organizations

and in organizational science generally. *Prerequisite: PSYC 606.*

LEAD 760. Proseminar in Principles of Nonprofit Organizations. 3.00

The first course in the concentration is designed to enhance students' understanding of how third-sector organizations differ in economic, legal and political terms from government and for-profit organizations. The course fosters understanding of the theoretical, organizational and practice space occupied by various types of nonprofit organizations within the sector as well as their purposes, and the current status of service provision.

LEAD 761. Civil Society and the Nonprofit Sector. 3.00

This doctoral survey course explores the synergy between civil society and the nonprofit sector by tracing the theoretical and historical perspectives of each. The role of cultural and political context in the development of civil society and the nonprofit sector are presented from a leadership perspective through emphasis on voluntary associations and their potential role in fostering social transformations across national and transnational boundaries. *Prerequisite: LEAD 760.*

LEAD 762. Organizational Governance. 3.00

The roles, structure, functions and composition of organizational boards and their relationship to organizational leadership and performance are investigated. Strategies for improved board performance and accountability are explored. *Prerequisite: LEAD 760.*

LEAD 763. Philanthropy and Resource Development. 3.00

A doctoral seminar exploring the historical, economic, political, social and psychological foundations of philanthropy in American society as well as the ethical, legal and financial aspects of organizational resource development. The role of leadership strategies for acquisition, maintenance and stewardship of resources including various organizational stakeholders is emphasized. The course includes perspectives from theory, empirical research and practice. *Prerequisite: LEAD 760.*

LEAD 764. Leadership and Accountability for Nonprofit Organizations. 3.00

This course presents methods of accountability, impact assessment and evaluation in nonprofit organizations in light of myriad stakeholders. The role of leadership in determining and implementing processes of internal and external evaluations is explored. *Prerequisite: LEAD 760, LEAD 761, LEAD 762, LEAD 763 and PSYC 606 or equivalent.*

LEAD 777. Empirical Approach to Leadership Training and Development. 3.00

This course involves instruction in the design, practice and evaluation of leadership development in a variety of settings. Empirical research on the use and effectiveness of leader development efforts will be reviewed. Students will analyze case studies of effective organizations and a variety of assessment and development activities will be completed as part of the course. Also students will respond to a sample request for proposals for leadership development. *Prerequisite: PSYC 605 or equivalent.*

LEAD 780. Policy Development and Analysis in Postsecondary Education. 3.00

Current issues of higher education are analyzed and future trends are discussed. Various approaches to policy development and their applications are examined from institutional, state, federal, legislative and international perspectives.

LEAD 790. Postsecondary Dynamics. 3.00

This course closely examines the dynamic relationship (and, within this, relationships) between students and postsecondary organizations. *Prerequisite: LEAD 740.*

LEAD 890. Advanced Leadership Dynamics. 3.00

This course and work experience represents the final pre-dissertation stage for the leadership studies doctoral program. As a capstone course and experience, it is designed to integrate prior knowledge (both tacit and explicit) and current work experiences with more advanced leadership concepts and applications. *Prerequisite: Must be admitted to the Strategic Leadership graduate program, or by permission of the instructor.*

LEAD 891. Externship in Advanced Leadership. 3.00

The externship represents the culmination of the student's formal course of study and is an applied learning opportunity. The instructor for LEAD 891 serves as the externship supervisor and oversees all aspects of the externship. During the course, the student can expect to spend at least 100 hours working within or for another organization.

LEAD 899. Dissertation Continuance 1.00 - 2.00

Continued study, research and writing in the area of dissertation concentration. This course does not count toward fulfilling the required hours for the degree; it may be repeated as needed. *Prerequisite: LEAD 900.*

LEAD 900. Doctoral Dissertation. 3.00 - 12.00

Provides advanced research required of all doctoral candidates. Course is graded on an S/U/I basis.

Learning, Technology and Leadership Education

LTLE 560. Foundations of Educational Technology. 3.00

The purpose of this course is to provide students with a critical framework with which to assess the impact of technology on education. Students will be examining the meaning of technology, discourses that construct technology and a variety of different social issues related to the use of educational technologies. *Prerequisite: Educational technology students: LTLE 570. Corequisite: Educational technology students: LTLE 570.*

LTLE 565. Educational Technology Management. 3.00

This course will focus on how to organize and provide leadership in educational technology programs. It is designed to provide a foundation for understanding educational technology management, including short and long range planning, project and resource management, and evaluation. *Prerequisite: Educational technology students: LTLE 570.*

LTLE 570. Design and Development of Digital Media. 3.00

The foundational skills course introduces the processes for the design, development and distribution of digital media elements. Concepts introduced include technical terminology; file management; computer-based learning, distance learning and blended learning; the use of collaborative tools for learning; and practical applications in K-12 and business. This course provides skills for future digital media development. *Corequisite: Educational technology students: LTLE 560 or LTLE 580.*

LTLE 580. Developing and Critiquing Visual Literacy. 3.00

This course will cultivate the ability to evaluate and create conceptual visual representations. Students will practice the necessary critical attitude, principles, tools and feedback to develop their own high-quality graphics for learning and performance. Topics also include the impact of visual literacy on the learning process related to instructional design, instructional technology and information presentation. *Prerequisite: Educational technology students: LTLE 570. Corequisite: Educational technology students: LTLE 570.*

LTLE 610. Principles of Instructional Design. 3.00

Examines the overarching process of instructional design as it relates to the design, development and implementation of technology-based instruction. Instructional design models will be compared and contrasted, and students will be challenged to develop their own model that is appropriate for the given workplace. Includes discussions on design methodologies, principles and instructional strategies. *Prerequisite: Educational technology students: LTLE 570 and EDUC 641. Corequisite: Educational technology students: EDUC 641.*

LTLE 611. User Interface Design. 3.00

This course will explore the concepts of mental models and user-centered designs; visual design including but not limited to color, consistency and iconic representation; layout, navigation and flow; affordances and constraints; principles of user interface design and universal design; cognitive load; and designing for transfer of learning. Students will practice communicating with stakeholders and target users to make iterative design changes and will apply appropriate methods and tools for usability testing, analysis and reporting. *Prerequisite: Educational technology students: LTLE 560 and LTLE 570.*

LTLTLE 622. Professional Development in Educational Technology. 3.00

This course will focus on instructional models, strategies and assessment of professional development activities among instructional leaders of educational settings. Professional development is the bridge between where prospective and experienced educators are now and where they will need to be in order to meet new challenges in their profession. System-wide planning including relevant content, strategies and organizational supports for educational technology will be emphasized. *Prerequisite: Educational technology students: LTLTLE 560, LTLTLE 570, LTLTLE 610 and EDUC 641. Corequisite: Educational technology students: LTLTLE 610 and EDUC 641.*

LTLTLE 625. Advanced Video and Audio Production. 3.00

This advanced course will address the pre-production, production and post-production process of making educational videos. The content is framed by discussions of critical media literacy and the integration of video into modern learning environments for training and school applications. Students will develop technical skills and hone artistic expression using message and design techniques, and will learn how video is used for research. This is a "hands-on" course where students will develop graded products, both individually and as part of a crew.

LTLTLE 631. Data Visualization. 3.00

Detailed study of different data visualization schema and techniques used to support instruction in a variety of areas. Discussion of best practices in the design of data visualization and use of appropriate tools including image processing and geographic information systems. Survey and analysis of the research base supporting the use of these tools in instruction. *Prerequisite: Educational technology students: LTLTLE 570 and LTLTLE 580.*

LTLTLE 645. Games, Simulations and Virtual Worlds for Learning. 3.00

This course explores modeling and simulation and their application in designing, developing and implementing games and virtual worlds for instruction. The goal of this course is to connect the theory of cognition and user interaction and apply them to develop engaging, effective instructional experiences in simulated environments. Includes survey of appropriate formative and summative assessment schemes and discussion of socio-cultural implications of constructing or deconstructing reality in learning environments. *Prerequisite: Educational technology students: LTLTLE 570.*

LTLTLE 648. Immigration and Education. 3.00

This course examines the multitude of factors that shape the immigrant student experience in U.S. schools. It takes an interdisciplinary perspective drawing on research from sociology, anthropology, history, economics, political science and education to understand teaching and learning from the perspective of immigrant students and families. Part of the course includes a 45-hour field component with the ELL Academy.

LTLTLE 650. eLearning Design. 3.00

This upper level course will address the theories, principles, instructional strategies and software applications used to create instructionally sound eLearning programs. The course content includes instructional design methodologies appropriate to the creation of eLearning programs, as well as the selection and utilization of media elements that support and enhance the learning process. Students will develop skills in instructional analysis, instructional design, problem solving, project management, consulting and teamwork while working with a variety of software applications to build a cohesive eLearning program. This applied course will require students to develop projects individually and as part of a design team. *Prerequisite: EDUC 641, LTLTLE 570 and LTLTLE 610.*

LTLTLE 655. Evaluation of eLearning. 3.00

This advanced course will address the practice of eLearning implementation and the processes and tools used to evaluate its effectiveness. *Prerequisite: Educational technology students: LTLTLE 570 and LTLTLE 650.*

LTLTLE 675. Applied Research Design 1.00

Evaluating the use of applied methodologies; identifying socially-responsible research topics in the workplace; writing and aligning research questions, theoretical and conceptual frameworks, methods and analyses; actively engaging in the literature review; writing for academic and professional purposes following style conventions; working with human subjects and program protocol; constructing an applied research timeline that may be iterative. *Prerequisite: EDUC 630. Inquiry in Education Educational technology students: EDUC 630 and LTLTLE 570.*

LTLTLE 695. Applied Research. 3.00

This course represents a "clinical" or "action research" approach to project development in which students identify problems then systemically design, develop and pilot an intervention. *Prerequisite: Educational technology students: Successful completion of comprehensive exam, LTLTLE 675 and LTLTLE 698.*

LTLTLE 698. Comprehensive Review Preparation 1.00

Continued preparation in anticipation of the comprehensive review. Course may be repeated as needed. *Prerequisite: Educational Technology students: LTLTLE 560, LTLTLE 570, LTLTLE 610, LTLTLE 675 and EDUC 641. Corequisite: Educational Technology students: LTLTLE 675.*

Literacy Education

LED 501. Workshop in Reading. 3.00

Designed to provide students with workshop experiences related to current needs in reading. The topics considered will be determined by interest and demand. No more than six credit hours earned in workshops in education can be applied to a major program.

LED 530. Literacy Development, Assessment and Instruction: K-12. 3.00

This course is designed to provide a foundation in literacy development, instructional strategies and assessment techniques in diverse classrooms grades K-12.

LED 566. Literacy Acquisition and Development of the Young Reader. 3.00

This course will provide pre-service teachers with an understanding of the foundations of early literacy development and instructional strategies and assessment techniques, which support the acquisition of literacy. *Prerequisite: ECED 511.*

LED 582. Foundations of Early and Elementary Literacy. 3.00

This course emphasizes the traditions, theories, and practices in preK-12 literacy that have emanated from a long history of research and practice. Participants will examine how particular theories of literacy impact the learning and teaching of literacy in preK-12 classrooms.

LED 586. Children's and Adolescent Literature. 3.00

This course is designed to acquaint participants with the nature, scope, and uses of children's and young adult literature for instructional, informational and recreational purposes. The implications of current theory, significant research and issues in literature study will be investigated and examined as they relate to the Pre K-12 learner.

LED 588. Writing Instruction. 3.00

This course focuses on the current theories and practices that pertain to writing instruction in K-12 school settings. Through this course, participants will examine historical and developmental perspectives, instructional contexts, assessment, and the uses of technology in writing instruction.

LED 590. Literacy Across the Curriculum (for M.A.T.). 3.00

Literacy Across the Curriculum (M.A.T.) explores how students comprehend and learn with text in PK – 6th grade classrooms and how teachers best foster these comprehension processes through the interdisciplinary nature of literacy.

LED 595. Literacy Across the Curriculum (for M.Ed.). 3.00

This course explores literacy-based learning in the preK-12 curriculum and the interdisciplinary nature of literacy.

LED 600. Research and Research Methods in Literacy. 3.00

This course is designed to help students evaluate and conduct research in literacy development and instruction. Students will examine a wide range of methodological frameworks used in literacy research and apply them to K-12 classroom-based inquiry projects.

LED 602. Word Knowledge: Phonics, Spelling, and Vocabulary. 3.00

Course content examines theoretical and practical contexts for language development and word knowledge instruction for K-12 classrooms. This includes an examination of the principles of word analysis by sound, pattern, and meaning through the study of phonemic awareness, phonics, spelling, vocabulary, and word identification.

LED 604. Literacy Instruction for English Language Learners. 3.00

This course is designed to help students develop an understanding of how to provide appropriate literacy instruction and curriculum materials for English language learners in grades pre-K through 12.

LED 635. Literacy Development and Instruction for English Language Learners. 3.00

Prepares for literacy instruction for English language learners beyond the emergent stage, focusing on assessment and instruction, comprehension instruction for individuals, small groups, and whole class situations. Students will examine the heterogeneous classroom structure and effectively plan instruction for the diversity of abilities, personalities, cultures, languages, and all individual learners in every educational setting. A practicum accompanies this course. *Corequisite: TESL 552.*

LED 636. Primary Grades Literacy Learning. 3.00

This course will provide pre-service 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: ECED 511, LED 566. Corequisite: ECED 611.*

LED 658. Practicum in Literacy Assessment and Intervention I. 3.00

The course emphasizes the principles, practices and applications of a variety of literacy assessments to address a range of individual needs in early and elementary literacy. *Prerequisite: LED 582, LED 586, LED 588, LED 595, LED 602, LED 604.*

LED 660. Practicum in Literacy Assessment and Intervention II. 3.00

The course emphasizes principles, practices and applications of a variety of literacy assessments to address a range of individual needs in adolescent literacy. *Prerequisite: LED 582, LED 586, LED 588, LED 595, LED 602, LED 604.*

LED 665. Organization and Supervision of Reading Programs. 3.00

This course emphasizes the organization and supervision of elementary, middle and secondary reading programs. The roles of the reading specialist, special reading teacher, administrator and supervisor are explored in relationship to the reading program. *Prerequisite: LED 660 or permission of instructor.*

LED 670. Literacy Coaching and Internship. 3.00

This course combines theoretical perspectives on preK-12 literacy coaching with a supervised practical experience at the school or school district level designed to improve literacy teaching and learning, with an emphasis on leadership in professional development. *Prerequisite: LED 660 and LED 665.*

LED 680. Reading and Research. 3.00

Directed reading and research in areas of special student interest. Reading and research may be done only in the major field of study. The plan for the study must be submitted in prescribed form and approved prior to registration for the course. *Prerequisite: EDUC 630 and written permission of the adviser and coordinator.*

LED 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

Master Business Administration

MBA 600. Organizational Behavior. 3.00

Through the use of experimental exercises and case studies, the student will gain greater depth of knowledge in the study of organizational behavior, including leadership, management of conflict, change strategies, and group and individual behavior.

MBA 601. Management of Innovation and Technology. 3.00

Course focuses on (a) the management of technology, which includes technology evolution, technology transfer, R&D and technology strategy, and (b) the innovation process, which includes idea generation and implementation, use of teams in new product development and virtual teams.

MBA 602. Management of New Product Development. 3.00

The management of new product development will be explored. The course focuses on managerial issues involved in the new product development process with a special emphasis on managing opportunity identification, product concept development, product concept evaluation, prototype testing and the launch of new products into the market place.

MBA 605. Entrepreneurship and Venture Creation. 3.00

Explores the many dimensions of new venture creation and growth. Formulation and implementation issues that relate to conceptualizing, developing and managing successful new ventures. Building a business model that generates profits and positively contributes to the economy and society. Analyze business opportunities and risk of new products and services.

MBA 606. Managing in an Innovation-Driven Global Environment. 3.00

Managers in today's business environment must contend not only with increasing rivalry from globalization, but from innovations that can arise from anywhere on the globe. This course addresses the foundation of these two challenges and how managers in organizations can effectively grapple with them.

MBA 607. Leadership Communication Skills for Business. 3.00

Students will participate in exercises that enhance awareness of listening and practice the use of questions as key elements in a leader's coaching tool kit. The course gives students real world tools and practice in methods critical to successful leadership that will be useful in all aspects of day-to-day business life. Topics include the language of communication, the leadership communication model, critical conversations as well as mentoring and coaching.

MBA 608. Interpersonal Leadership and Managing Organizational Behavior. 3.00

Course develops organizational leaders capable of inspiring themselves and others. Blending theory, cases, and pragmatic wisdom, assessments will enable students to better understand themselves and others, and then utilize that knowledge to better lead and manage. Theories and usable frameworks related to emotional intelligence, interpersonal skills, motivation, power and effective leadership are utilized. Additional emphasis is on ethically leading change in fast-moving environments. *Prerequisite: Executive Leadership MBA or permission of instructor*

MBA 609. Leadership Skills Accelerator. 3.00

This course develops skills of negotiation, management of conflict, coaching, mentoring, stress and crisis management. *Prerequisite: Admission to Executive Leadership MBA or permission of instructor.*

MBA 610. Statistical Analysis for Decision Making. 3.00

This course provides a rigorous introduction to the application of statistical and quantitative techniques to business situations. Students will employ computational skills in a software-assisted environment to understand data and to use data to aid in making business decisions.

MBA 611. Project Management. 3.00

This course focuses on different techniques and tools for managing many types of projects. The course addresses a variety of project management issues such as making a case for doing a project, project charter, project risk, developing project plans, stakeholder management, organizational strategy and cultural fit, and status reporting. Use of project management software is used throughout the course.

MBA 613. Foundations of Marketing Leadership. 3.00

The course focuses on the roles and responsibilities of marketing leaders within organizations. Topics covered may include determining the role and organization of marketing within the firm, identifying and reacting to market transitions, creating marketing strategy, coordinating marketing across the firm, leading the marketing transformation process, and determining marketing accountability.

MBA 614. Cultivating Global Business Leadership. 3.00

This course will help students understand how geographical distances and cultural differences influence stresses that multinational leaders encounter as they operate in global markets. Students fit experiences into an accurate global perspective defined by conceptual frameworks, examine effects of cross-country differences, and gain in-depth of knowledge associated with global market leadership. Geographic dimensions will prepare leaders for dealing with specific origin–destination pairs. *Prerequisite: Admission to Executive Leadership MBA or permission of instructor.*

MBA 615. Supply Chain Management and Logistics. 3.00

This course examines efficient management of supply chain and logistics to meet demands of business. Topics include evaluation of operations and supply chain strategies; quality assurance; product and service design considerations; process planning; lean principles; resource planning including location, capacity and inventory decisions; and supply chain design considerations. Covers major functions to support overall business operations with emphasis on cost, benefit and risk considerations.

MBA 616. Financial Statement Analysis and Reporting. 3.00

In this course, students learn how to examine financial reports with insight and confidence. Topics include financial analysis, performance evaluation, use of present value concepts, fiduciary and managerial control, compliance oversight, corporate governance and ethical dimensions of reporting. *Prerequisite: Admission to Executive Leadership MBA or permission of instructor.*

MBA 617. Corporate Financial Decision-Making. 3.00

This course provides in-depth study of the theories of capital structure, capital budgeting, long-term financing decisions, working capital management and current topics such as mergers and bankruptcy. Students will analyze various capital budgeting evaluation methods, evaluate how firms make capital structure decisions, perform financial analysis to assess the financial condition and performance of a business entity, and examine to what extent corporate policy affects the value of a firm. *Prerequisite: MBA 616 or MBA 620.*

MBA 618. Information Systems Strategy and Leadership. 3.00

This course focuses on what organization leaders need to know about the Information Systems (IS) function, the Information Technology (IT) infrastructure and the role that they play in an organization. Topics covered in this course may include getting business value from an IT investment, IS governance, partnerships with external entities for delivering IT services, managing and recovery from IT risks.

MBA 620. Accounting for Decision-Making and Control. 3.00

Designed to present use of accounting in business decision-making. Covers concepts and theories pertinent to the management function. *Prerequisite: One semester of introductory accounting. Not available for graduate credit for Master of Science program studies.*

MBA 621. Leading Through Big Data Analytics. 3.00

This course focuses on capturing data opportunities to increase revenue and productivity of existing units as well as to introduce new business units. Focus is on crafting and implementing a big-data and advanced-analytics strategy. This includes core analytical knowledge, implementation, intellectual data property, recruiting and selecting analytics talent, capitalizing on data analytics opportunities, and ensuring managers find resulting decision tools simple and engaging for daily use. *Prerequisite: Admission to Executive Leadership MBA or permission of instructor.*

MBA 622. Managing Risk in Global Financial Markets. 3.00

This course examines global financial markets and how firms adapt their strategy to capitalize on the opportunities to manage risks. Course analyzes international financial management issues and risks faced by businesses operating in global markets and evaluates various instruments and approaches used to address them. Students develop an understanding of how firms can take advantage of the opportunities presented by different countries, institutions, financial systems and macroeconomic trends. *Prerequisite: Admission to Executive Leadership MBA or permission of instructor.*

MBA 625. Online Search Advertising. 3.00

This course utilizes problem-based learning (PBL) where teams solve complex online marketing problems. PBL develops reflective and flexible thinkers who use knowledge to take action. Active learners are involved in online marketing campaigns. Client relationships, financial constraints, market competition, time limitations and technology impact decisions. Teams work with clients in a live marketing platform using a real budget. Campaigns require finance, advertising and marketing decisions. *Prerequisite: Permission of the instructor.*

MBA 630. Financial Management for Accountants. 3.00

This course provides an in-depth study of valuation in capital markets with a particular emphasis on applications in financial accounting. Topics include valuation of fixed income, equity and derivative financial instruments in liquid and ill-liquid markets as well as the valuation of entire companies. The course emphasizes quantitative problem solving with extensive use of the case method. Students should have previously completed two semesters of Intermediate Accounting.

MBA 641. The Microeconomics of Business Decision-Making. 3.00

This course is designed to provide graduate business students with the basic analytical tools needed to understand the decisions made by profit-maximizing firms and the causal linkages between these decisions and market structures. The course uses case study approach to examine market demand, the costs and organization of production, and the structures of the markets in which firms operate.

MBA 650. Managing Human Resources. 3.00

Emphasis is placed on selection interviewing, worker-managerial crisis interviewing, Equal Employment Opportunity Commission, placement procedures and assessing manager effectiveness.

MBA 652. Technology Enhanced Decision-Making. 3.00

This course provides an introduction to techniques for structuring and analyzing managerial decision problems involving major uncertainties. Topics include decision tree and influence diagrams, probability assessment, risk analysis, risk attitudes and sensitivity analysis. Group decision making and groupware technologies will also be discussed. Emphasis is placed on the use of computer software for decision analysis.

MBA 653. Business Law. 3.00

A study of the principles of the law of contracts, agency, sales, commercial paper and business organizations; emphasizes the effect of such laws on business operations.

MBA 654. Investments Analysis. 3.00

Investment theory, development and application of analytical tools in the appraisal and selection of investments.

MBA 656. Business Process Management. 3.00

This course focuses on the analytical approaches to successful process management for business applications. Students will learn to map and model business processes, analyze these processes, define improvement opportunities, as well as implement and document the improved process.

MBA 658. Financial Risk Analysis and Management. 3.00

The purpose of the course is to introduce the student to the different aspects of risk, as well as the analysis and management of risk. Applications include sensitivity analysis, Monte Carlo and Latin Hypercube simulations, and the use of forwards, futures and options to manage risk. *Prerequisite: MBA 617.*

MBA 664. Negotiations and Conflict Management. 3.00

This course focuses on the identification and development of effective negotiation skills that can be utilized in business and interpersonal relationships. Applications of bargaining principles are also discussed in the context of the resolution of disputes between both organizations and individuals.

MBA 667. Analytical Decision-Making for the Ethical Manager. 3.00

In this course, students learn how to use research and data analysis to improve managers' decision making effectiveness. Students learn an approach to decision making that is based on using the best and least-biased information and data available and will consider how such information and data can be used to enhance ethical decision making.

MBA 674. Directed Research (Management) 1.00 - 3.00

Opportunity for directed research in areas of special interest. *Prerequisite: Permission of instructor and Master of Business Administration program director.*

MBA 675. Directed Research (Marketing) 1.00 - 3.00

Opportunity for directed research in areas of special interest. *Prerequisite: Permission of instructor and Master of Business Administration program director.*

MBA 678. Special Topics. 3.00

Special topics in business administration. Content varies depending upon semester and instructor.

MBA 680. Introduction to Information Security. 3.00

Overview of information security exploring basic concepts and developing knowledge and skills of protecting valuable information assets and systems. *Prerequisite: Admission to Information Security MBA or permission of instructor.*

MBA 681. Managing System Networks. 3.00

Development of understanding and skills for managing effective security in enterprises that depend upon information infrastructures and engage in e-commerce. *Prerequisite: Admission to Information Security MBA or permission of instructor.*

MBA 682. Managerial Computer Forensics. 3.00

To educate current and future managers in the roles, responsibilities, nature, structure, content, parties, networks, tools and processes involved in computer (digital) forensics. *Prerequisite: Admission to Information Security MBA or permission of instructor.*

MBA 685. Information Security Ethics and Policy. 3.00

Explores social, philosophical, ethical, and policy implications of information security by covering issues that will be faced both as members of a technological society as well as business professionals. *Prerequisite: Admission to Information Security MBA or permission of instructor.*

MBA 691. Strategic Management. 3.00

This course seeks to explain why firm performance differs. Particular attention is paid to external environmental analysis, internal environmental analysis, corporate and business level strategy, and strategy implementation as key drivers of firm performance.

MBA 695. Cultural Awareness Experience. 3.00

The main part of this course is an international trip where students experience a different culture. The trip will include a wide variety of cultural and business outings. Students will maintain a journal throughout the trip. The course also includes preparatory work before the trip and post-trip analysis and discussion.

Math Education

MAED 600. Seminar in Mathematics Education. 3.00

This survey course is designed to familiarize teachers with current research topics related to mathematics teaching and learning. Research topics include: teacher professional development, mathematical reasoning (e.g., algebraic, geometric, multiplicative, proportional, arithmetical); implementing standards-based curriculum, assessment of student learning, the role of representations, teaching for problem solving and theories that frame research.

MAED 610. Curricular Trends in Mathematics Teaching and Learning. 3.00

This course offers opportunities for teachers to explore curricular goals and implementations for various mathematics topics addressed in middle and secondary mathematics classrooms. Teachers will consider different curricula and how those curricula might be implemented to effectively support student learning. Mathematics topics addressed include algebra, proportional reasoning, geometry and advanced mathematics.

MAED 626. Advanced Mathematics Instruction for K-8. 3.00

This course will prepare teachers to engage in student-centered mathematics instruction in grades K-8. Instruction will focus on number and operations, algebra, geometry, measurement, data analysis, and probability. The Principles and Standards for School Mathematics will provide foundational ideas for the topics in the course, including the use of the five process standards and the use of technology in the teaching and learning of mathematics. *Prerequisite: MATH 502.*

MAED 627. Assessment of Learners (Leadership I). 3.00

This course is designed to help teachers create, implement, and evaluate both formal and informal assessment techniques. Teachers will construct instruments ranging from formative learning checks to summative tests and projects and the corresponding rubrics for evaluation purposes. Teachers will also learn to analyze assessment results in order to gauge student understanding and knowledge, and to use this information to modify instruction accordingly. *Prerequisite: MATH 502 and MAED 626.*

MAED 628. Diverse Learners in the Mathematics Classroom. 3.00

This course is designed to help teachers understand the learning characteristics of struggling and diverse learners in mathematics classrooms and to use the research-based instructional strategies which target these learning characteristics. The focus of the course will be learning to work effectively with students with learning disabilities in mathematics as well as English language learners. *Prerequisite: MATH 502, MATH 503, MAED 626 and MAED 627.*

MAED 629. Professional Development of Adult Learners (Leadership II). 3.00

This course is designed to help teachers build those skills, understandings and dispositions required to play optimal mathematics education leadership roles in elementary/middle schools. In particular, this course will help mathematics specialists create, implement, and evaluate a variety of professional development experiences for classroom teachers. *Prerequisite: MATH 502, MATH 503, MATH 504, MATH 505, MAED 626, MAED 627, and MAED 628.*

MAED 630. Research in Mathematics Education (Leadership III). 3.00

This course is designed to familiarize teachers with the body of research related to selected topics in mathematics education and will help teachers further their understanding of the relationships between research and practice. Teachers will use this course to begin to develop ideas for a final project for the program. *Prerequisite: MATH 502, MATH 503, MATH 504, MATH 505, MAED 626, MAED 627, MAED 628, and MAED 629.*

MAED 631. Externship in Education I. 3.00

This course is designed to support teachers in developing a final project for the mathematics specialists program. Projects should be developed in conjunction with the teacher's school or school division and should help prepare teachers for the role of a mathematics specialist in an elementary/middle school setting. *Prerequisite: MATH 502, MATH 503, MATH 504, MATH 505, MAED 626, MAED 627, MAED 628, MAED 629, and MAED 630.*

MAED 632. Externship in Education II. 3.00

This course is designed to support teachers in implementing a final project in conjunction with their schools or school divisions which will help prepare them for the role of a mathematics specialists in an elementary/middle school setting. *Prerequisite: MATH 502, MATH 503, MATH 504, MATH 505, MAED 626, MAED 627, MAED 628, MAED 629, MAED 630, and MAED 631.*

Mathematics

MATH 502. Numbers and Operations for K-8. 3.00

This course will explore topics important to the mathematical experiences of students in K-5 classrooms including addition, subtraction, multiplication, division, place value, and properties of whole numbers. Relevant connections to the history of mathematics will also be included.

MATH 503. Algebra and Functions for K-8. 3.00

The course is designed to develop an understanding of topics from algebra: variables, patterns, and functions; modeling and interpreting graphs; linear and non-linear functions, connecting these ideas to underlying concepts in primary and middle grades mathematics. Attention will be given to interpreting and assessing students work and learning. Relevant connections to the history of mathematics will also be included. *Prerequisite: MATH 502, MAED 626, and MAED 627.*

MATH 504. Rational Numbers for K-8. 3.00

This course is designed to help participants develop understanding in: theoretical development of math and students' learning of math within content strands of rational numbers and proportional reasoning; development of pedagogical knowledge of rational numbers and proportional reasoning appropriate for K-8 Mathematics Teacher Specialists; and assessment of K-8 students' mathematical conceptions through interviews. Relevant connections to the history of mathematics will also be included. *Prerequisite: MATH 502, MATH 503, MAED 626, MAED 627, MAED 628, and MAED 629.*

MATH 505. Probability and Statistics for K-8. 3.00

The course will develop students' understanding of probabilistic structures, reasoning, data analysis and exploration. These structures will be related to real world problem solving. Attention will also be given to children's thinking, how they learn this basic mathematics, their problem solving strategies, and how they construct their understanding of our number system and arithmetic. Relevant connections to the history of mathematics will also be included. *Prerequisite: MATH 502, MATH 503, MATH 504, MAED 626, MAED 627, MAED 628, MAED 629.*

MATH 506. Geometry for K-8. 3.00

Explorations of foundations of informal measurement and geometry in one, two, and three dimensions. The van Hiele model for geometric learning is used as a framework for how children understand measurement and geometric relationships. Visualization, spatial reasoning, and geometric modeling are stressed. Transformational geometry, congruence, similarity, and geometric constructions will be discussed and relevant connections to history of mathematics will be included. *Prerequisite: MATH 502, MATH 503, MATH 504, MATH 505, MAED 626, MAED 627, MAED 628, MAED 629, MAED 630 and MAED 631.*

MATH 510. Modern Analysis. 3.00

A course to update and broaden secondary teachers' capability and point-of-view with respect to topics in analysis. Applications of concepts such as limits, continuity, differentiation and integration. May be taken for graduate credit and for certificate renewal by secondary school teachers. *Prerequisite: Undergraduate analysis or permission of instructor.*

MATH 512. Discrete Mathematics. 3.00

A course to update and broaden secondary teachers' capability and point-of-view with respect to topics in discrete mathematics. May be taken for graduate credit for certificate renewal by secondary school teachers. *Prerequisite: Undergraduate mathematics through linear algebra.*

MATH 514. Modern Algebra. 3.00

From advanced viewpoint, an investigation of topics in algebra from high school curriculum. Theory of equations, polynomial rings, rational functions and elementary number theory. Course may be taken for graduate credit for certificate renewal by secondary school teachers. *Prerequisite: Undergraduate algebra or permission of the instructor.*

MATH 517. Probability and Statistics I. 3.00

Topics in probability, modeling, and connections to the high school curriculum. Course may be taken for graduate credit and for certificate renewal by secondary school teachers. *Prerequisite: Undergraduate mathematics through linear algebra.*

MATH 520. Modern Geometry. 3.00

Topics in geometry of concern to secondary teachers in their work and provision for background and enrichment. Various approaches to study of geometry, including vector geometry, transformational geometry and axiomatics. Course may be taken for graduate credit and for certificate renewal by secondary school teachers. *Prerequisite: Undergraduate mathematics through linear algebra or undergraduate geometry.*

MATH 522. Statistics for Researchers. 3.00

Introduction to statistics and statistical methods, including descriptive techniques, tests of hypotheses, confidence intervals, regression, analysis of variance, nonparametric procedures and the use of SPSS. Data models include one and two-sample comparison of means, repeated measures, comparison of proportions, Chi-square test of independence, McNemar test, simple linear and logistic regression.

MATH 585. Special Topics. 3.00**MATH 615. History of Mathematics. 3.00**

Topics in the history of mathematics of particular concern to secondary teachers in their work and provision for background and enrichment. Selected topics spanning ancient times to the present. Course may be taken for graduate credit and for certificate renewal by secondary school teachers.

MATH 617. Probability and Statistics I. 3.00

AP probability and statistics topics sampling, experimentation and anticipating patterns. These include Bayes's theorem; binomial, geometric, uniform, normal, t and Chi-square random variables and the mean and variance of linear combinations of random variables. Sampling distributions and central limit theorem, unbiased point estimates of population parameters and the variance of point estimates. Types of generalizations and conclusions that can be drawn including cause and effect. Course may be taken for graduate credit and for certificate renewal by secondary teachers.

MATH 618. Probability and Statistics II. 3.00

AP statistics topics exploring data and statistical inference. Correlation and simple linear regression, interpretation of residual plots, influential points and transformations. Logic of significance testing including hypotheses, errors, p-values and power. Statistical inference methods (confidence intervals, significance tests, and the relationship between one- and two-side tests and confidence intervals) for proportions and means, the slope of a regression line and the Chi-Square tests. Course may be taken for graduate credit and for certificate renewal by secondary teachers. *Prerequisite: MATH 617 or permission of instructor.*

MATH 626E. Biological Applications of Statistics. 3.00

The design of biological experiments and applications of statistical techniques in ecology, cell biology, physiology, behavior, systematics, genetics, and evolution. Emphasis will be placed on relevant concepts in experimental design and statistical analysis, decision making related to selecting appropriate experimental designs and analysis techniques, and the practical application of design and analysis for graduate research projects. *Prerequisite: BIO 602*

Middle and Secondary Education**MSSE 570H. Social Studies Teaching Methods, Grades 9-12. 3.00**

Research findings about teaching in the content area will be used to identify the most effective instructional strategies for teaching that content to students in grades 9-12. 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: MSSE 470, MSSE 471, READ 440, admission to teacher education, and admission to the M.A.T. program. Corequisite: MSSE 571H*

MSSE 570M. Mathematics Teaching Methods, Grades 9-12. 3.00

Research findings about teaching in the content area will be used to identify the most effective instructional strategies for teaching that content to students in grades 9-12. 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: MSSE 470, MSSE 471, READ 440, admission to teacher education, and admission to the M.A.T. program. Corequisite: MSSE 571M*

MSSE 570S. Natural Sciences Teaching Methods, Grades 9-12. 3.00

Research findings about teaching in the content area will be used to identify the most effective instructional strategies for teaching that content to students in grades 9-12. 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: MSSE 470, MSSE 471, READ 440, admission to teacher education, and admission to the M.A.T. program. Corequisite: MSSE 571S*

MSSE 571H. Field Experience in High School Social Studies, Practicum III. 3.00

Provides practical classroom experience for teacher education candidates in the secondary education programs under the supervision of an in-service 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. *Prerequisite: MSSE 470, MSSE 471, READ 440.*

MSSE 571M. Field Experience in High School Mathematics, Practicum III. 3.00

Provides practical classroom experience for teacher education candidates in the secondary education programs under the supervision of an in-service 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. *Prerequisite: MSSE 470, MSSE 471, READ 440.*

MSSE 571S. Field Experience in High School Natural Science, Practicum III. 3.00

Provides practical classroom experience for teacher education candidates in the secondary education programs under the supervision of an in-service 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. *Prerequisite: MSSE 470, MSSE 471, READ 440.*

MSSE 607. Middle and Secondary Curriculum and Co-Curriculum. 3.00

The course is designed to help prospective teachers develop the knowledge, skills and dispositions necessary for their role in curriculum development and delivery in a diverse school and classroom environment. *Prerequisite: MSSE 370, admission to teacher education and admission to the M.A.T. program.*

MSSE 625. Assessment in Secondary Education. 3.00

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: MSSE 370, Admission to Teacher Education and the M.A.T. program.*

MSSE 630. Research for Practitioners. 3.00

Skills, methods, insights and understandings which will enable the beginning teacher to become an intelligent and critical consumer of educational research and an informed participant in professional practice. *Prerequisite: MSSE 625 and admission to teacher education and the M.A.T. program.*

MSSE 650. Internship Seminar. 3.00

A seminar designed to promote reflective decision making among teacher candidates during their internship experience. During seminar sessions teacher candidates will engage in case analysis and Teacher Work Sample development. *Prerequisite: MSSE 690 for middle education students or MSSE 675 for secondary education students.*

MSSE 675. Internship in Middle and Secondary Education. 4.00.

Participants will experience the full range of conditions and tasks expected of a teacher for students in grades 6-12. 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 eight credits. Students will receive a grade of 'S' for satisfactory performance or 'U' for unsatisfactory performance. *Prerequisite: MSSE 650.*

MSSE 690. Internship in Middle Education. 4.00.

Participants will experience the full range of conditions and tasks expected of a teacher for students in grades 6-8. 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 eight credits. Students will receive a grade of "S" for satisfactory performance or "U" for unsatisfactory performance. Intended for middle education minors. *Prerequisite: MSSE 650.*

Middle Education**MIED 501. Workshop in Middle Education 1.00 - 3.00**

Designed to provide students with workshop experiences related to current needs evident in middle education. The topics considered will be determined by interest and demand. No more than six credit hours earned in workshops in education can be applied to a major program.

MIED 530. Teaching Mathematics in the Elementary and Middle Grades. 3.00

Individual and group study of content, methodology and instructional materials necessary to the design and implementation of instructional programs in modern mathematics. Attention is given to differentiation of instruction in terms of learning ability.

MIED 610. Collaborative Leadership in Schools. 3.00

Designed to provide students with research, theories and practices regarding teacher leadership and collaboration in school contexts and methods for addressing school-based improvement efforts and processes. Specific attention is given to collaboration and leadership toward community involvement and communication in middle schools.

MIED 620. Assessment in Middle Education. 3.00

The course is designed to help teacher education candidates develop competencies for designing and utilizing effective assessment strategies for determining student performance and progress in a variety of instructional situations and for making a range of instructional decisions, including how to integrate the curriculum to best serve middle school students' needs. *Prerequisite: MSSE 370, and admission to the M.A.T. program in Middle Education.*

MIED 656. Seminar in Middle Education. 3.00

An intensive study of selected problems in middle education. Research findings are reviewed and educational theory is explored.

MIED 680. Reading and Research. 3.00

Directed reading and research in areas of student interest. Reading and research may be done only in the major field of study. A plan for study must be submitted in prescribed form and approved prior to registration for the course. *Prerequisite: Written permission of adviser and program coordinator.*

Music

MUAP 713. Presenting a Piano Masterclass 1.00

MUAP 713 offers graduate piano area students the opportunity to develop the skills necessary in order to present an effective public masterclass. The class is a requirement for all D.M.A. students in the piano area.

MUS 520. Piano Technology 1.00 - 2.00

The acoustical and mechanical design and history of the piano theory of tuning and temperaments; advanced procedures and techniques of regulating and voicing pianos. Additional hour of credit for tuning lab.

MUS 535. Instrumentation. 3.00

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.

MUS 540. Jazz Improvisation Laboratory II 1.00

Presents intermediate to advanced improvisation skills in the jazz idiom alone for graduate music majors. Emphasis is on the theoretical analysis of chord progression as well as creative musical application. A research paper dealing with advanced musical improvisation concepts is required. *Prerequisite: Permission of instructor.*

MUS 541. Vocal Arranging. 2.00.

Students explore the art of arranging songs for solo and choral groups with or without accompaniment. Multiple styles and choral ensemble types are included. Those enrolled in 541 are responsible for rehearsing and leading performances sung by the class and university ensembles.

MUS 542. Instrumental Arranging. 2.00.

Arranging for various instrumental ensembles, including techniques of orchestration. Class projects include orchestrating excerpts for brass, woodwind and string ensembles, and a complete arrangement for full wind ensemble or symphony orchestra.

MUS 544. Counterpoint. 2.00.

Modal and tonal counterpoint. Two, three and four voice forms, florid counterpoint. Study of imitative techniques and form analysis. *Prerequisite: MUS 242 or equivalent.*

MUS 545. Orchestration. 3.00

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: MUS 435 or permission of the instructor.*

MUS 548. History and Literature of Wind Performance. 3.00

A survey of the history of literature for wind and percussion ensembles from pre-Renaissance to the present. Emphasis on 20th-century literature including works of Husa, Holst, Vaughan Williams, Grainger, Hindemith and Schwanter.

MUS 551. Music Composition. 2.00. - 3.00

Composition in 20th-century styles and techniques. Individualized instruction for composition majors. *Prerequisite: Permission of instructor. Three credit hours for composition majors only.*

MUS 552. Music Composition. 2.00. - 3.00

Composition in 20th-century styles and techniques. Individualized instruction for composition majors. *Prerequisite: Permission of instructor. Three credit hours for composition majors only.*

MUS 556. Choral Literature I. 3.00

An advanced survey of choral literature from the pre-Renaissance through the Classical period including a cappella and accompanied works. A thorough examination will be undertaken of the parallel trends in keyboard and instrumental music through the mature works of Beethoven.

MUS 557. Choral Literature II. 3.00

An advanced survey of choral literature from the pre-Renaissance through the Classical period including a cappella and accompanied works. A thorough examination will be undertaken of the parallel trends in keyboard and instrumental music through the mature works of Beethoven.

MUS 568. Song Literature II. 2.00.

A survey of vocal art-song literature in Western culture emphasizing the Italian, French, English and American composers, repertoire and concepts. If time permits, other international repertoire will also be surveyed.

MUS 576. Music Theory Practices. 3.00

Common-practice music theory with an introduction to 20th-century analysis. Current theory texts are examined.

MUS 598. Selected Topics in Music 1.00 - 4.00

Courses in music which are of a topical nature. May be repeated

MUS 600. Research Methods. 3.00

Research as a discipline; current trends and types of research in music. Overview of bibliographical and other resources for music study. Research in bibliography and techniques culminating in a research paper in area of concentration. Normally taken in the first year of graduate study.

MUS 601. Advanced Tonal Analysis and Introduction to Post-tonal Analysis. 3.00

Advanced analysis of tonal music and an introduction to post-tonal analytical techniques.

MUS 603P. Solo Percussion Literature. 3.00

An in-depth study of solo percussion literature. The course will cover history, style, performance traditions and other pertinent issues related to the music and composers.

MUS 604P. Percussion Ensemble Literature. 2.00.

An in-depth study of percussion ensemble literature. Class participants will study history, style, development, performance traditions and other pertinent issues related to the music and composers.

MUS 606P. Percussion Ensemble Literature Lab 1.00

A laboratory study of percussion ensemble literature. The course will be taken the same semester as MUS 604P and will focus on the study of scores, the historical importance of the music and conducting the music studied.

MUS 651. Music Composition. 2.00. - 3.00

Advanced original composition utilizing various 20th-century styles and techniques. *Prerequisite: MUS 551-552. Three credit hours for composition majors only.*

MUS 652. Music Composition. 2.00. - 3.00

Advanced original composition utilizing various 20th-century styles and techniques. *Prerequisite: MUS 551-552. Three credit hours for composition majors only.*

MUS 680. Document in Music Theory. 3.00

Final research project for composition majors specializing in theory, who choose three credits of course work and a smaller document rather than the thesis. Follows thesis procedures.

MUS 690. Special Studies in Music 1.00 - 3.00

Opportunity for supervised independent study in areas of special interest to the student. May be repeated for credit.

MUS 697. Composition Final Project and Recital. 2.00.

Project shall be a work for large ensemble. Instrumentation and scope to be determined in consultation with the composition instructor. In addition, students will present a recital of their original works, the majority of which must have been composed during the student's graduate course of study in the School of Music.

MUS 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

MUS 699. Thesis Continuance. 2.00.

Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

MUS 700. Thesis Research 1.00 - 6.00

This course is graded on a satisfactory/unsatisfactory/incomplete (S/U/I) basis.

MUS 701. Analytical Techniques I. 3.00

Analysis of representative works from the nineteenth and twentieth centuries. Consideration will be given to melody, rhythm, harmony, texture and form. *Prerequisite: Placement by diagnostic examination or MUS 576.*

MUS 702. Advanced Seminar in Music Theory. 3.00

An advanced graduate topical seminar in music theory. May be repeated for credit when the topic changes. *Prerequisite:*

MUS 703A. Seminar in Vocal Literature. 2.00.

An in-depth study of selected topics related to the standard solo vocal literature. Requires research papers, bibliographies and class presentations. Topics presented on a rotating basis per semester will include German lied, French mélodie, Anglo-American song and other national schools of singing. May be repeated for credit when the topic changes. Doctoral students are required to take two semesters. *Prerequisite: Undergraduate course or equivalency examination in MUS 467.*

MUS 703B. Opera History and Literature. 3.00

Opera History and Literature is a study of Western European operatic genres from the seventeenth century to the present. It will include such genres as masque, opera seria, opera buffa, singspiel, French vaudeville, ballad opera, grand opera, zarzuela and operetta. *Prerequisite: Permission of the instructor.*

MUS 703F. Seminar in Piano Literature. 3.00

This seminar will be dedicated to the intensive study of a single topic related to the literature written for the piano. The topics would change each semester, and could focus on the piano literature associated with a particular country, composer or period, or could trace the development of a specific genre, such as the sonata, concerto, suite or variation set. The seminar could also focus on a detailed study of selected masterworks of piano repertoire. May be repeated for credit when course content changes.

MUS 703H. Seminar in Choral Literature for Conductors. 2.00.

A one-hour per week seminar designed for in-depth score study of selected major works. The course instructor, in consultation with the student, will determine three to five compositions to be studied. Students will do an in-depth analysis of selected works, with the goal of creating an informed musical interpretation.

MUS 703I. Seminar in Orchestral Literature for Conductors. 2.00.

A one-hour per week seminar designed for in-depth score study of selected major works. The course instructor, in consultation with the student, will determine three to five compositions to be studied. Students will do an in-depth analysis of selected works, with the goal of creating an informed musical interpretation.

MUS 703J. Seminar in Wind Literature for Conductors. 2.00.

A one-hour per week seminar designed for in-depth score study of selected major works. The course instructor, in consultation with the student, will determine three to five compositions to be studied. Students will do an in-depth analysis of selected works, with the goal of creating an informed musical interpretation.

MUS 703P. Solo Percussion Literature. 3.00

An in-depth study of solo percussion literature. The course will cover history, style, performance traditions and other pertinent issues related to the music and composers.

MUS 703T. Solo Brass Literature. 3.00

Study of brass solo literature. Emphasis upon historical perspectives, aspects of performance practice techniques, performances of representative works and score analysis. *Prerequisite: Permission of the instructor.*

MUS 704P. Percussion Ensemble Literature. 2.00.

An in-depth study of percussion ensemble literature. Class participants will study history, style, development, performance traditions and other pertinent issues related to the music and composers.

MUS 706P. Percussion Ensemble Literature Lab 1.00

A laboratory study of percussion ensemble literature. The course will be taken the same semester as MUS 704P and will focus on the study of scores, the historical importance of the music and conducting the music studied.

MUS 707A. Score and Literature Survey for Choral Conductors I. 3.00

This course has been designed to give an overview of choral literature both from an historical perspective (musical period, genre, composers, performance practice, style) and more

practical review of pieces suggested for performance at the senior high school, college, and adult levels. While standard composers and works will be studied, the instructors may include lesser-known works and contemporary literature of interest. The literature will be studied by reading through scores and listening to recordings of significant works. The instructor and guest lecturers will present ideas about the pieces, successful programming and appropriate selection of literature for specific levels.

MUS 707B. Score and Literature Survey for Orchestral Conductors I. 3.00

This course has been designed to give an overview of orchestral literature both from a historical perspective (musical period, genre, composers, performance practice, style) and more practical review of pieces suggested for performance at the senior high school, college, and adult levels. While standard composers and works will be studied, the instructors may include lesser-known works and contemporary literature of interest. The literature will be studied by reading through scores and listening to recordings of significant works. The instructor and guest lecturers will present ideas about the pieces, successful programming and appropriate selection of literature for specific levels.

MUS 707C. Score and Literature Survey for Wind Conductors I. 3.00

This course has been designed to give an overview of wind literature both from a historical perspective (musical period, genre, composers, performance practice, style) and more practical review of pieces suggested for performance at the senior high school, college, and adult levels. While standard composers and works will be studied, the instructors may include lesser-known works and contemporary literature of interest. The literature will be studied by reading through scores and listening to recordings of significant works. The instructor and guest lecturers will present ideas about the pieces, successful programming and appropriate selection of literature for specific levels.

MUS 708A. Score and Literature Survey for Choral Conductors II. 3.00

This course functions as the continuation of MUS 707A. It is designed to give an overview of choral literature both from a historical perspective (musical period, genre, composers, performance practice, style) and a more practical review of pieces suggested for performance at the senior high school, college and adult levels. While standard composers and works will be studied, the instructors may include lesser-known works and contemporary literature of interest. The literature will be studied by reading through scores and listening to recordings of significant works. The instructor and guest lecturers will present ideas about the pieces, successful programming and appropriate selection of literature for specific levels. *Prerequisite: MUS 707A.*

MUS 708B. Score and Literature Survey for Orchestral Conductors II. 3.00

This course functions as the continuation of MUS 707B. It is designed to give an overview of orchestral literature both from a historical perspective (musical period, genre, composers, performance practice, style) and a more practical review of pieces suggested for performance at the senior high school, college and adult levels. While standard composers and works will be studied, the instructors may include lesser-known works and contemporary literature of interest. The literature will be studied by reading through scores and listening to recordings of significant works. The instructor and guest lecturers will present ideas about the pieces, successful programming and appropriate selection of literature for specific levels. *Prerequisite: MUS 707B.*

MUS 708C. Score and Literature Survey for Wind Conductors II. 3.00

This course functions as the continuation of MUS 707C. It is designed to give an overview of wind literature both from a historical perspective (musical period, genre, composers, performance practice, style) and a more practical review of pieces suggested for performance at the senior high school, college and adult levels. While standard composers and works will be studied, the instructors may include lesser-known works and contemporary literature of interest. The literature will be studied by reading through scores and listening to recordings of significant works. The instructor and guest lecturers will present ideas about the pieces, successful programming and appropriate selection of literature for specific levels. *Prerequisite: MUS 707C.*

MUS 710. Percussion Chamber Music Literature. 3.00

An in-depth study of percussion chamber music literature. The course will include composers, history, style, performance traditions and other pertinent issues related to the music written for percussion and other instruments.

MUS 740. The German Lied for Pianists and Singers. 2.00.

A seminar devoted to the study and performance of the German lied. Topics will change each time the course is offered. Enrollment limited to graduate pianists and vocalists.

MUS 750. Graduate Musicology or Ethnomusicology Seminar. 3.00

An advanced graduate topical seminar in musicology or ethnomusicology. May be repeated for credit when the topic changes.

MUS 758. Brass Ensemble Literature. 3.00

Study of brass ensemble literature. Emphasis upon works for brass quintet and large brass ensemble, historical perspectives, aspects of performance practice techniques, performances of representative works and score analysis.

MUS 759. Aspects of Wind Performance. 2.00.

Topics of interest related to wind performance; may include performance anxiety, performance health, Alexander technique and performance practices specific to the student's primary instrument of study which may include topics in Baroque and Classical ornamentation, jazz style and interpretation, and contemporary, extended performance techniques. *Prerequisite: Permission of the instructor.*

MUS 761. Doctoral Recital. 3.00

A public performance of doctoral level repertoire. Will be repeated for credit.

MUS 762. Doctor of Musical Arts Lecture Recital. 3.00

A public lecture recital in which the candidate reports the results of graduate-level research in lecture format and performs music from the topic of research. Topics might be analytical, historical or pedagogical in nature. One semester prior to the lecture recital semester, the student must submit a proposal stating the nature of the research to be approved by the student's advisory committee.

MUS 763. Doctor of Musical Arts Document 1.00 - 3.00

May be repeated until 3 credits are completed. A thesis that is an expansion of the lecture-recital research (MUS 762). Graded on a satisfactory/unsatisfactory (S/U) basis. *Prerequisite: MUS 600.*

Music Education

MUED 531. Psychology of Music. 3.00

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, music therapy settings).

MUED 570. Marching Band Procedures. 2.00.

Skills and knowledge needed to organize, administer, plan and teach marching band shows including shows for various competitions, parades, football, basketball and festival events; techniques for developing both marching and playing style through a functional method of fundamental drills.

MUED 598. Selected Topics in Music Education 1.00 - 4.00

Courses in music education which are of a topical nature. May be repeated.

MUED 660. Introduction to Graduate Study in Music 1.00

This course provides an overview of the goals and guiding principles for the Master of Music with a concentration in music education. The required portfolio project will be begun in this course.

MUED 661. The Professional Portfolio 1.00

This course provides the opportunity to draw together the strands of the Master of Music with a concentration in music education in the form of a professional portfolio and in preparation for the comprehensive exam and the thesis/document.

MUED 670. Principles and Practices in Music Education. 3.00

The foundations underlying music education programs and practices found in the history of music education, philosophy with special emphasis on aesthetics, sociology, social psychology and psychology. Practices in music education are examined from the perspective of these foundation studies.

MUED 671. Methodological Approaches to Research in Music Education. 2.00.

A core music education graduate course focused on the methodological approaches to research within the domain of music education. This course focuses on the foundations underlying music education research. Research approaches in music education are examined from the perspective of these foundational studies.

MUED 680. Capstone Prospectus Development in Music Education. 2.00.

This class serves as the penultimate class to the final capstone project (MUED 700) and provides students with the opportunity to explore topics and relevant literature, as well as to plan methodology/project details with a music education faculty member. The class should be taken in a semester prior to MUED 700. *Prerequisite:* MUED 560

MUED 690. Special Studies in Music Education 1.00 - 3.00

Opportunity for supervised independent study in areas of special interest to the student. May be repeated for credit.

MUED 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

MUED 699. Thesis Continuance. 2.00.

Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

MUED 700. Capstone Project in Music Education. 3.00

This course provides students the opportunity to complete their final capstone project with a music education faculty member. The class should be taken in the semester after successful completion of MUED 680. *Prerequisite:* MUED 680

Music Instruction, Applied

MUAP 535. Treble Chamber Choir 1.00

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.

MUAP 537. Marching Band 1.00**MUAP 538. Concert Band 1.00**

Ensembles are required in performance tracks and recommended as electives in other programs. In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated.

MUAP 540. Chorale 1.00**MUAP 541. Madison Singers 1.00 - 2.00****MUAP 543. Opera Theatre 1.00 - 2.00****MUAP 544. Chamber Orchestra 1.00****MUAP 545. Symphony Orchestra 1.00****MUAP 546. Wind Symphony 1.00****MUAP 547. Jazz Ensemble 1.00****MUAP 548. Jazz Band 1.00****MUAP 550. String Ensemble 1.00****MUAP 551. Woodwind Ensemble 1.00****MUAP 552. Brass Band 1.00**

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.

MUAP 553. Guitar Ensemble 1.00**MUAP 554. Percussion Ensemble 1.00****MUAP 556. Flute Choir 1.00****MUAP 557. Piano Accompanying and Ensemble 1.00**

Prerequisite: Restriction to Graduate Music Majors

MUAP 564. Camerata Strings 1.00

Camerata Strings is a selected 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.

MUAP 580. Collegium Musicum 1.00

The Collegium Musicum is a select vocal/instrumental ensemble dedicated to the historical-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.

MUAP 600. Applied Music Lesson 1.00 - 3.00

Applied weekly lessons with minimum practice requirements for master's level students. See MyMadison for details. May be repeated. *Prerequisite:* Restriction to Graduate Music Majors.

MUAP 640. Chorale. 0.00 - 1.00

In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated. Any of the MUAP 600-level ensembles may be taken for 0 credits if needed with adviser's recommendation.

MUAP 641. Madison Singers. 0.00 - 1.00

In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated. Any of the MUAP 600-level ensembles may be taken for 0 credits if needed with adviser's recommendation.

MUAP 643. Opera Theater. 0.00 - 1.00

In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated. Any of the MUAP 600-level ensembles may be taken for 0 credits if needed with adviser's recommendation.

MUAP 644. Chamber Orchestra. 0.00 - 1.00

In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated. Any of the MUAP 600-level ensembles may be taken for 0 credits if needed with adviser's recommendation.

MUAP 645. Symphony Orchestra. 0.00 - 1.00

In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated. Any of the MUAP 600-level ensembles may be taken for 0 credits if needed with adviser's recommendation.

MUAP 646. Wind Symphony. 0.00 - 1.00

In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated. Any of the MUAP 600-level ensembles may be taken for 0 credits if needed with adviser's recommendation.

MUAP 647. Jazz Ensemble. 0.00 - 1.00

In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated. Any of the MUAP 600-level ensembles may be taken for 0 credits if needed with adviser's recommendation.

MUAP 648. Jazz Band. 0.00 - 1.00

In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated. Any of the MUAP 600-level ensembles may be taken for 0 credits if needed with adviser's recommendation.

MUAP 649. Monticello Strings Faculty and Students Ensemble 1.00

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.

MUAP 650. String Chamber Music Performance. 2.00.

Preparation and performance of string chamber music.

MUAP 651. Woodwind Ensemble. 0.00 - 1.00

In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated. Any of the MUAP 600-level ensembles may be taken for 0 credits if needed with adviser's recommendation.

MUAP 652. Brass Band. 0.00 - 1.00

In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated. Any of the MUAP 600-level ensembles may be taken for 0 credits if needed with adviser's recommendation.

MUAP 654. Percussion Ensemble. 0.00 - 1.00

In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated. Any of the MUAP 600-level ensembles may be taken for 0 credits if needed with adviser's recommendation.

MUAP 657. Piano Accompanying and Ensemble. 0.00 - 1.00

In consultation with the adviser, students may elect the following ensembles, most of which require an audition. May be repeated. Any of the MUAP 600-level ensembles may be taken for 0 credits if needed with adviser's recommendation.

MUAP 680. Collegium Musicum 1.00

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

MUAP 681. Bach Aria Group 1.00

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.

MUAP 695. Graduate Recital 1.00

A public performance including advanced repertoire in a variety of styles. MUAP 695 is required of all students with a major in performance in the Master of Music degree program. *Prerequisite: Permission of major applied division.*

MUAP 696. Graduate Lecture Recital. 2.00.

A public lecture/performance demonstrating knowledge of advance repertoire in a variety of styles. Recital must be accompanied by a formal document. MUAP 696 is required of all majors in conducting. *Prerequisite: Permission of major applied division.*

MUAP 697. Graduate Composition Recital 1.00

A public performance of original compositions, the majority of which must have been composed during the student's graduate course of study in the School of Music. *Prerequisite: Permission of major applied division.*

MUAP 699. Applied Lessons on Secondary String Instrument 1.00

Applied lessons on a secondary string instrument. This allows string players to take applied lessons on another instrument in their category (upper or lower).

MUAP 700. Applied Music Lesson 1.00 - 4.00

Applied weekly lessons for all doctoral level students. See MyMadison for details. May be repeated. *Prerequisite: Doctoral Music Students only.*

MUAP 701. Doctoral Secondary Applied Flute 1.00 - 4.00

One hour private lesson per week on secondary instrument. Lessons are arranged on an individual basis. May be repeated.

MUAP 708A. Doctoral Secondary Applied Conducting – Choral. 2.00.

Course consist of a one-hour private lesson per week in a secondary applied conducting medium. Lessons are arranged on an individual basis. DMA conducting students will be required to study and prepare repertoire in the secondary medium and may be offered opportunities to conduct in the area in rehearsal and in performance. *Prerequisite: Permission of instructor.*

MUAP 708B. Doctoral Secondary Applied Conducting – Orchestral. 2.00.

Course consist of a one-hour private lesson per week in a secondary applied conducting medium. Lessons are arranged on an individual basis. DMA conducting students will be required to study and prepare repertoire in the secondary medium and may be offered opportunities to conduct in the area in rehearsal and in performance. *Prerequisite: Permission of instructor.*

MUAP 708C. Doctoral Secondary Applied Conducting – Wind Band. 2.00.

Course consist of a one-hour private lesson per week in a secondary applied conducting medium. Lessons are arranged on an individual basis. DMA conducting students will be required to study and prepare repertoire in the secondary medium and may be offered opportunities to conduct in the area in rehearsal and in performance. *Prerequisite: Permission of instructor.*

MUAP 709. Graduate Piano Seminar: Preparing for the Job Market 1.00

MUAP 709 will prepare graduate piano students with the materials and with the skills needed for the job application and interview process associated primarily with, though not limited to, positions in higher education. The class is a requirement for all D.M.A. students specializing in the piano area.

MUAP 731. String Orchestral Excerpts. 2.00.

The study of standard orchestral excerpts from the Baroque period to the present. May be repeated for credit.

Music Pedagogy

MUPED 640. Conducting Pedagogy. 3.00

An advanced graduate course focused on the pedagogy of conducting in both the instrumental (winds and orchestra) and vocal (choral) areas.

MUPED 672. Secondary Woodwind Pedagogy 1.00

Secondary Woodwind Instrumental Pedagogy will examine selected woodwind instruments and related pedagogical materials in the Multiple Woodwind Doctor of Musical Arts concentration. Topics will include historical development, solo and instructional literature, private instructional approaches and techniques, and career development. The course may be repeated for credit.

MUPED 704. Music Pedagogy in Higher Education. 3.00

Presents research related to learning theory, developmental characteristics of students in higher education, and instructional and motivational strategies for both classroom and individual applied instruction in music. Covers planning, assessment, professional behavior and instructional technology available at JMU. Normally taken in the first semester of study for the D.M.A.

MUPED 705. Music Pedagogy in Higher Education II: Teaching Music History and General Education. 3.00

Students apply the knowledge gained in MUPED 704 and become acquainted with specific techniques and teaching resources in two areas: music history and general education. *Prerequisite: MUPED 704.*

MUPED 706. Music Pedagogy in Higher Education III: Theory. 3.00

Examination of the philosophies, curricula, resources and techniques of teaching undergraduate music theory (written and aural components). Extensive review of the textbook literature and curricular design, study of contrasting theoretical and cognitive approaches, classroom observations, practice teaching and follow-up discussions suitable to undergraduate instruction. *Prerequisite: MUPED 704. Passing Score on Graduate Music Theory Entrance Exam or MUS 576.*

MUPED 725. String Pedagogy for Major Instrument I. 2.00.

Teaching of the applied major instrument from the beginning level to intermediate level. Includes an overview of repertoire at each level and various schools of teaching. Detailed investigation into bow and left hand technique, technique rehabilitation, stylistic interpretation, hands-on opportunities for teaching students from beginning to intermediate levels.

MUPED 726. String Pedagogy for Major Instrument II. 2.00.

Teaching the applied major instrument from the college to advanced levels. Includes an overview of repertoire at each level and various schools of teaching. Detailed investigation into bow and left hand technique, technique rehabilitation, stylistic interpretation, hands-on opportunities for teaching students of various levels. *Prerequisite: MUPED 725.*

MUPED 727. Pedagogy and Materials for Second String Instruments 1.00

Provides pedagogy and literature materials for a secondary string instrument within the student's own instrument category (upper or lower strings).

MUPED 740. Conducting Pedagogy. 3.00

An advanced graduate course focused on the pedagogy of conducting in both the instrumental (winds and orchestra) and vocal (choral) areas.

MUPED 750. Applied Percussion Pedagogy. 3.00

Teaching applied percussion from college to advanced levels. Includes an overview of repertoire at each level and various schools of technique. Detailed investigation into hand and body techniques in performing on snare drum, timpani and keyboard percussion instruments. Hands-on opportunities for teaching students of various levels.

MUPED 760. Applied Brass Pedagogy. 3.00

Teaching of applied brass from college to advanced levels. Includes an overview of pedagogical methods, historical material, and other materials and resources related to brass instruments.

MUPED 770. Group Piano Pedagogy Seminar. 0.00 – 1.00

Teaching strategies, materials and techniques for teaching class piano. Topics include testing and evaluation of skills, pacing, motivation and solving problems commonly encountered teaching keyboard skills in the group setting. Required for all class piano teaching assistants. Open to any graduate music major with permission of instructor. *Prerequisite: Permission of instructor.*

MUPED 771. Graduate Applied Piano Pedagogy. 2.00.

Piano teaching at the college level. Includes an overview of goals and expectations for the college level piano student; pedagogical considerations in teaching undergraduate repertoire; learning theory and application to teaching. Provides opportunities for investigating specific topics pertaining to technique, musicianship, repertoire, stylistic interpretation, practice strategies, performing. *Prerequisite: MUS 371 or equivalent course or experience.*

MUPED 772. Applied Woodwind Pedagogy. 2.00.

Presentations of instrumental methods, solo and ensemble literature related to the woodwind performer's own major area. Private instruction approaches and techniques, studio management and chamber music coaching are also considered, with particular reference to the college-level student.

MUPED 773. Woodwind Pedagogy Practicum. 2.00.

Includes supervision of applied teaching at the college level, with emphasis on solidifying pedagogical concepts, individual lesson planning, masterclass presentation concepts and curriculum/course of study development. Addresses developing an applied studio/program at the college level, for a wide variety of higher education contexts. Prepares student for job search in higher education, including development of application materials and audition/review preparation. *Prerequisite: MUPED 772.*

MUPED 777. Vocal Pedagogy I. 3.00

Detailed review of anatomical and physiological components of vocal production. Comparative study of various approaches to vocal pedagogy from 1700 to the present. Studio observation is a required component of this course. *Prerequisite: MUS 477 or equivalent.*

MUPED 778. Vocal Pedagogy II. 3.00

A comprehensive study of vocal development and disorders in children, adult and aging voices as it relates to singing. Traditional and non-traditional approaches to training and working with varying vocal conditions which arise during the life cycle will be covered. An attempt will be made to include modern technological approaches to vocal diagnosis and training. *Prerequisite: MUPED 777 or equivalent.*

MUPED 779. Vocal Pedagogy Practicum 1.00 - 2.00

This practicum provides experience in individual and group applied voice lessons under the supervision of a faculty instructor. May be repeated once for a maximum of three credits.
Prerequisite: MUPED 777 or permission of instructor.

Nursing

NSG 520. Advanced Health Assessment. 3.00

This course provides advanced knowledge and health assessment skills. Emphasis is placed on interviewing, history taking, physical assessment and diagnosis based on clinical findings. Normal and abnormal health assessment findings are emphasized. Characteristics of clients from diverse ethnic and cultural backgrounds and age groups are considered. Considerations for the aging client are emphasized. Classroom activities focus primarily on assessments that require history-taking skills and utilize organizing theory and frameworks. Labs focus on the knowledge and skills for history-taking and physical examination.

NSG 521. Advanced Concepts in Pathophysiology. 3.00

An advanced, clinically-oriented study of human physiology and the alterations in body functions that underlie diseases in humans. *Prerequisite:* Admission to the Graduate Nursing program.

NSG 522. Advanced Clinical Pharmacotherapeutics. 3.00

Building upon the knowledge of pharmacology learned at the undergraduate level, this course examines concepts in pharmacotherapeutics necessary for Advanced Practice Registered Nurses (APRN) and Clinical Nurse Leaders (CNL) practice. Emphasis will be placed on pharmacokinetics and pharmacodynamics of important classes of drugs. Considerations for the aging client will be highlighted. Case studies will provide an opportunity for critical thinking, clinical application and care coordination.

NSG 531. International Health: An Eastern Africa Perspective. 4.00.

This program will provide graduate nursing students an opportunity for learning, clinical experience, community engagement and cultural enrichment in the vistas of Eastern Africa. Students will participate in clinical experiences at various hospital clinics, health screening programs and health project planning to gain an understanding of the healthcare delivery system and health conditions of local populations. Students will participate on interprofessional teams with faculty and students at various schools of nursing to work collaboratively and build relationships. In addition, students will explore physical and social environments to understand the individual, societal and population-based influences on health and well-being in this region.

NSG 611. Research for the Advanced Health Professional. 3.00

This course will provide a foundation for the examination of components of the nursing research process. Integrative review methodologies and evidence-based practice models will be emphasized. Skills needed to build and assimilate knowledge for improving practice outcomes will be highlighted.

NSG 612. Theoretical Foundations of Advanced Nursing. 3.00

This course provides students with an opportunity to analyze and utilize nursing models and theories to explain advanced nursing practice. Students will explore advanced nursing from a theoretical standpoint and identify strategies for evaluating selected models and theories.

NSG 630. Care Delivery and Coordination I. 4.00.

This course focuses on the evaluation, management and care coordination for clients with common acute health deviations across the adult lifespan within a variety of contexts. The course builds on knowledge and skills from advanced health assessment and pathophysiology. Emphasis is placed on formulating diagnoses and plans of care that encompass client, family and coordinated systems of care. *Prerequisite:* NSG 520, NSG 521. *Corequisite:* NSG 520, NSG 521.

NSG 631. Care Delivery and Coordination II. 4.00.

This course focuses on the evaluations, management and coordination of care for adolescent and adult clients with chronic health deviations within a variety of contexts. The course builds on the knowledge and skills from advanced health assessment, pathophysiology, and pharmacology and ethics. Emphasis is placed on formulating diagnoses and developing plans of care that encompass clients, families and community resources. *Prerequisite:* NSG 520, NSG 521; *Corequisite:* NSG 522.

NSG 632. Coordinated Care of the Elderly. 3.00

This course focuses on the health issues and needs of older adults and principles for evaluating, managing, and coordinating their care. Students will differentiate normal changes and symptoms of aging from disease-related symptoms, focusing on the achievement of optimal health and function for older adults. Emphasis is on the collaborative role of advanced practice nurses in assisting older adults and family caregivers from diverse ethnic and cultural backgrounds to negotiate health care delivery systems. *Prerequisite:* NSG 520, NSG 521 and NSG 522. *Corequisite:* NSG 520, NSG 521 and NSG 522.

NSG 634. Advanced Nursing Role Development 1.00

This course will focus on historical and development aspects and competencies of advanced nursing and the continuing evolution of this role. Students will explore the varied roles that advanced nurses assume in the health care system and the legal and ethical considerations for practice.

NSG 635. Family Centered Care Delivery. 3.00

This course focuses on care given to the family unit and individuals within the family unit. Family theory, assessment and management will be emphasized. Emphasis will be placed on assessment and care of the childbearing family and the family with young children. Individual care will focus on the pregnant woman, the newborn, infant, toddler, preschool and school age child (up to adolescence). This course builds on knowledge and skills from advanced health assessment, pathophysiology and pharmacology. *Prerequisite:* NSG 520, NSG 521, and NSG 522.

NSG 650. Organizational Behavior in Health Care. 3.00

This course focuses on theories, research and frameworks that enhance the advanced nurse's understanding of behavior, leadership and management in interprofessional health care teams and organizations. Emphasis is on the "micro" and "macro" level issues and their implications for interprofessional behavior management and change in health care systems.

NSG 651. Leadership Development. 3.00

This course focuses on developing knowledge and understanding of nurse leader roles. Leadership theory and interdisciplinary team decision making in culturally diverse healthcare settings are reviewed. Aspects of leadership in relation to the utilization of current research-based information to plan for the design, implementation and evaluation of client-centered care will be examined.

NSG 653. Educational Methodologies for Nurse Leaders. 3.00

In this online course students will learn to use educational principles, strategies, and technologies to provide evidence-based teaching to patients and the inter-professional health care team. Teaching and learning to improve health care quality and safety will be emphasized.

NSG 655. Concepts for Nurse Administrators. 3.00

This course provides a synthesis of concepts used for effective performance of the nurse administrator's role in organizations. The use of human and financial resources is examined within an organizational framework, and the strategic management of organizational goals, culture and diversity is highlighted.

NSG 671. Practicum I. 3.00

Emphasizes advanced practice role development, complex and holistic client/family care, health promotion/maintenance and care coordination. Practicum is individualized and will highlight the advanced practice roles of clinician, manager, consultant, educator and researcher. Clinical competencies will be emphasized to prepare the student for nurse practitioner

certification. *Prerequisite:* NSG 520, NSG 521 and NSG 630. *Corequisite:* NSG 522.

NSG 672. Practicum II. 5.00

Emphasis is on the application of clinical skills, theories, concepts, issues and research findings to the clinical care of children, adolescents, adults and/or older adults. Care coordination issues will be addressed as they specifically impact diverse populations in all care settings. Clinical competencies will be emphasized to prepare the student for nurse practitioner certification. *Prerequisite:* NSG 630 and NSG 671.

NSG 673. Practicum III. 5.00

Continues emphasis on the application of clinical skills, theories, concepts, issues and research findings to the clinical care of children, adolescents, adults and/or older adults. Care coordination issues will be addressed as they specifically impact the selected patient population. Clinical competencies will be emphasized to prepare the student for nurse practitioner certification. *Prerequisite:* NSG 631 and NSG 672.

NSG 676. Clinical Nurse Leader Practicum I. 2.00-4.00

This course provides opportunities to apply and integrate leadership knowledge and concepts through an immersion experience. Emphasis is on improving outcomes for patients and/or a clinical area as an information manager. Interventions for health care/education, disease prevention, and risk reduction will be implemented that promote safe, quality care.

NSG 677. Clinical Nurse Leader Practicum II. 4.00.

This course provides opportunities to apply and integrate knowledge and concepts through an immersion experience. Emphasis is on delivery systems and functions that impact patient safety and quality of care. System analysis/risk anticipation, technology utilization, and/or resource management are explored. *Prerequisite:* NSG 676.

NSG 678. Nursing Administration Practicum I. 2.00-4.00

This practicum course is designed to provide opportunities to apply administrative principles in a health care setting. Emphasis is placed on the effective use of resources to improve client health outcomes.

NSG 679. Nursing Administration Practicum II. 4.00.

This practicum course is designed to provide opportunities to apply administrative principles in a health care setting. Emphasis is placed on the organizational environment, and interface with governmental and non-governmental organizations. *Prerequisite:* NSG 678.

NSG 680. Independent Study in Nursing 1.00 - 3.00

This course provides the opportunity for independent study in a specialized area of concentration. It is conducted under the supervision of a faculty member *Prerequisite:* Approval of Graduate Program Director.

NSG 681. Special Topics in Advanced Practice Nursing 1.00 - 5.00

The course provides study of specific topics in Advanced Practice Nursing. May be repeated for credit as course content changes. Courses are offered based on faculty and student interests.

NSG 682. Health Informatics for Advanced Nursing. 3.00

This course focuses on nursing and healthcare informatics and their technological applications in healthcare. Specifically, it will emphasize using technology with an interprofessional team to improve patient care and safety. This course will demonstrate effective approaches to health care delivery using health information technology. The framework for this course utilizes a nursing informatics model that is comprised of three core domains: point-of-care technology, data management and analytics, and patient safety and quality. Students will develop their nursing informatics knowledge and skills through reading, discussions, case studies, exploration and utilization of electronic modalities. While targeted primarily for the nursing arena, this course is also of value in most health-related professions and disciplines.

NSG 683. Healthcare Finance Management. 3.00

Terminology, tools and methods of financial management in healthcare organizations and systems are examined. Concepts critical to making sound business and financial decisions in an ever changing healthcare economic climate are explored.

NSG 690. Epidemiology and Population Assessment. 3.00

This course focuses on the distribution of health-related conditions within human populations and factors influencing their distribution. Emphasis is on measurement of the health of populations, the natural history of diseases, study design, and assessment of data sources within the context of interprofessional practice. It addresses health systems that focus on health promotion and disease prevention.

NSG 692. Health Policy for Practice and Advocacy. 3.00

This course addresses the foundation of health policymaking. It emphasizes policy analysis for interprofessional practitioners in leadership roles. Federal and state policy-making and the mechanisms for health policy change are emphasized. Policy issues impacting health delivery will form the basis for the development of critical understanding of policy development.

NSG 696. Advanced Practicum. 3.00 - 6.00

Emphasis on the application of skills, theories, concepts, issues and research findings to the clinical care of selected populations in age ranges appropriate for the selected track. Clinical competency for a specific population is emphasized. This course will use clinical preceptors as well as faculty. *Prerequisite:* NSG 673 or permission of the instructor. *Corequisite:* For FNP students: NSG 635.

NSG 711. Analytical Methods for Health Care. 3.00

This course prepares doctoral level practitioners with skills and competencies needed to assimilate knowledge at a high level of complexity focusing upon clinical scholarship in nursing. Students will focus on quantitative, qualitative, and mixed methods to critically appraise available data and research to achieve a better understanding of clinical decision-making and evidence-based practice.

NSG 712. Issues and Methods in Translational Inquiry. 3.00

Traditional nursing practice has relied more on experiential wisdom than science to make decisions that affect patient outcomes. This course will build on research methodologies and informatics to analyze and evaluate research underlying evidence-based practice. It will explore models used in the dissemination of knowledge and the translation of research into practice within the context of interprofessional practice.

NSG 713. Evidence Based Practice: Clinical Prevention and Population Health Promotion. 3.00

Health is imperative for quality of life and for economic vitality. This course explores theory development regarding health behavior and strategies for interventions with individuals and populations. Program development, implementation, evaluation and initiatives to reduce risk and improve health status are explored. Evidence based practice to improve clinical preventive services is examined.

NSG 714. Evidence Based Practice: Chronic Illness. 3.00

This course addresses best practices for chronic disease care. Chronic illness is highly prevalent, costly and preventable. Issues resulting from chronic illness are explored within the context of Interprofessional collaboration and care. Theoretical frameworks for chronic illness are reviewed. Standards of care for select chronic illnesses will be compared with evidence-based practice literature.

NSG 771. Advanced Practicum I 1.00 - 5.00

This is the first of three practicum courses designed to help students build and assimilate knowledge for advanced specialty practice at a high level of complexity. Practicum I has a

direct practice emphasis. Students examine the evidence base that informs interprofessional practice and apply findings in the provision of client focused interventions.

NSG 772. Advanced Practicum II 1.00 – 5.00

This is the second of three practicum courses designed to help students build and assimilate knowledge for advanced specialty practice at a high level of complexity. Practicum II has a health systems emphasis. Within the advanced practice role, students examine and analyze systems of care and the implications for client and population-focused care.

NSG 773. Advanced Practicum III 1.00 – 5.00

In Practicum III, students synthesize and expand learning developed to this point, and demonstrate mastery of advanced practice at a high level of complexity. This course provides the practice context within which the final DNP project is completed.

NSG 799. DNP Project 1.00

This course provides the opportunity for completion of a scholarly clinical project in an area of interest as directed by a faculty mentor. Repeatable up to three times.

NSG 800. Scholarly Writing and Presentations. 3.00

The course prepares the student for scholarly writing. It emphasizes key elements of scholarly writing, authorship principles and identification of ethical considerations.

Nutrition

NUTR 545. Nutrition and Exercise. 3.00

Addresses the relationship of nutrition and exercise and the effect of dietary intake. Techniques of nutritional assessment and counseling through dietary plans will be investigated. This course is designed especially for professionals who may be employed in physical fitness programs. *Prerequisite: NUTR 280 or equivalent.*

NUTR 555. Theories and Practices of Weight Management. 3.00

An examination of the physiological, psychological and environmental theories of obesity. Current trends in obesity research are examined. A case study and laboratories are utilized to provide students with practical experience in conducting a weight loss program. *Prerequisite: BIO 270, BIO 290, NUTR 280 or permission of instructor.*

NUTR 582. Nutrition and Metabolism. 3.00

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. The development of an individual nutrition research project, collection and reporting of data is required. *Prerequisite: NUTR 280, physiology, biochemistry and statistics.*

NUTR 650. Nutrition Education and Counseling. 3.00

Review of philosophy and provisions of major nutrition education of current research in the field of dietetics. Techniques of planning, implementing and evaluating programs. Theories and techniques of nutrition counseling. Nutrition education and counseling experience will be provided in a variety of settings. *Prerequisite: Admission to M.S. in health sciences program with dietetics concentration, which includes RD status, or permission of the instructor.*

NUTR 652. Nutrition Assessment. 3.00

Methods of assessing nutritional status of people in clinical and experimental settings. *Prerequisite: NUTR 384 or equivalent.*

NUTR 654. Current Topics in Food. 3.00

In-depth study of a variety of current topics related to the United States and global food supply, food processing, food regulation, food marketing and the relationship between foods and disease. *Prerequisite: Admission to M.S. in health sciences program with dietetics concentration, which includes RD status, or permission of the instructor.*

NUTR 655. Integrated Nutrition. 3.00

The biochemical and physiological processes involved in nourishing the body in health and in disease. *Prerequisite: Admission to M.S. in health sciences program with dietetics concentration, which includes RD status, or permission of the instructor.*

NUTR 660. Research Methods in Dietetics. 3.00

This course emphasizes skills in the initiation, conduct and interpretation of research, particularly that involving social science techniques applied to dietetics and health sciences. Emphasis is given to measurement issues, design, questionnaire development, survey techniques, field research, evaluation, quantitative (using SPSS) and qualitative analysis, and ethical issues. *Prerequisite: Undergraduate or graduate-level statistics course.*

NUTR 671. Nutrition in Disease Development, Progression, and Prevention. 3.00

Pathophysiology of disease will be investigated in this course, emphasizing the role of inflammation in development of major chronic diseases. The impact of nutrients on inflammation and in specific disease states and various nutrients and food components that can be used as preventive measures or treatment modalities will be emphasized. *Prerequisite: Admission to M.S. in health sciences program with dietetics concentration, which includes RD status, or permission of the instructor.*

NUTR 672. Professional Practice Issues in Dietetics. 3.00

This course emphasizes development of skills needed by registered dietitians in leadership positions in the profession, professional associations, administrative dietetics employment positions, and other volunteer or employment professional settings. Topics include communication strategies, developing a strategic approach to professional skills and competencies, grant writing, leadership, public policy and legislative issues. *Prerequisite: Admission to M.S. in health sciences program with dietetics concentration, which includes RD status, or permission of the instructor.*

NUTR 673. Advanced Management in Dietetics. 3.00

Management and leadership principles will be investigated with emphasis on skills needed in food service, dietetics or nutrition-related services. Current research used in policy making will be reviewed. Focus areas include project, financial, human resource and outcomes management; quality assurance; marketing strategies; employment law; regulation of food and health care; entrepreneurship; and adult education and training. *Prerequisite: Admission to M.S. in health sciences program with dietetics concentration, which includes RD status, or permission of the instructor.*

NUTR 675. Nutrigenomics. 3.00

The role of food choice and physical activity on gene expression and the impact on health and wellness of individuals will be explored. Also, the role of genetics and nutrition therapy in the prevention and development of chronic disease will be examined. *Prerequisite: Admission to M.S. in health sciences program with dietetics concentration, which includes RD status, or permission of the instructor.*

NUTR 680. Reading and Research. 3.00

Directed reading and library research in designated areas of specialized interest in the field of nutrition and dietetics. Investigating, researching and reporting on focused topic determined by student and adviser. Course may be repeated for credit, with permission of the adviser if content changes. *Prerequisite: Permission of adviser.*

NUTR 681. Directed Research in Dietetics I. 2.00.

Advanced research in dietetics directed by a graduate advisory committee. Course will be graded on an S/U basis. *Prerequisite: Unconditional admission status in the graduate program and NUTR 660.*

NUTR 682. Directed Research in Dietetics II. 2.00.

Advanced research in dietetics research directed by a graduate advisory committee. Course will be graded on an S/U basis. *Prerequisite: NUTR 681.*

NUTR 685. Field Work in Dietetics. 3.00 - 6.00

Practical experience in applying dietetics theory to problems encountered in a professional setting. Specific assignments will be determined by the needs of the student. *Prerequisite:* Permission of adviser.

NUTR 695. Research Interpretation in Dietetics 1.00

Critical evaluation and interpretation of current research in the field of dietetics. Critiques of research articles will be conducted by the class, with discussion regarding each study. Each component of the research process will be evaluated to assist students with their own research reporting. *Prerequisite:* MATH 220.

NUTR 696. Graduate Seminar in Dietetics 1.00

A professional seminar will be presented to all graduate students and faculty, with an oral and graphic presentation of results obtained from research completed in NUTR 682 or NUTR 701. The required presentations must be given during the semester this course is taken. Presentations as both a seminar and a poster session are required. *Prerequisite:* NUTR 695, NUTR 660, NUTR 681, MATH 522; NUTR 682 or NUTR 701. *Corequisite:* NUTR 682 or NUTR 701.

NUTR 697. Directed Research Continuance 1.00

Continued study, research and writing in the area of directed research project. Course may be repeated as needed, but does not count toward degree requirements. Course will be graded on an S/U basis.

NUTR 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

NUTR 700. Thesis Research I. 3.00

Advanced research in dietetics directed by a graduate advisory committee, written in traditional thesis format. Course will be graded on an S/U basis. *Prerequisite:* Unconditional admission status in the graduate program, NUTR 660, and permission of adviser.

NUTR 701. Thesis Research II. 3.00

Advanced research in dietetics directed by a graduate advisory committee, written in traditional thesis format. Course will be graded on an S/U basis. *Prerequisite:* Unconditional admission status in the graduate program, NUTR 700, and permission of adviser.

Occupational Therapy

OT 510. Therapeutic Interaction. 3.00

This course focuses on the therapeutic process, small group dynamics, professional interactions, cultural sensitivity and client-practitioner relationships. Topics include professional socialization, communication skills and exploration of self within the context of personal and professional attitudes, values and beliefs. *Prerequisite:* Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or by permission of the program director.

OT 520. Occupational Development Through the Lifespan. 3.00

Occupational development from infancy to old age comprises the content. The specific interactions of the human and the environment in fostering physical, social, emotional, cognitive, moral and psychological growth are covered. The acquisition of values, roles, habits, temporal adaptations and interests during each stage of life are explored. *Prerequisite:* Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or by permission of the program director.

OT 530. Human Occupation and the Foundations of the Profession. 3.00

Occupation as a fundamental human behavior is explored. The conceptual basis of occupational engagement including time, tool use, environmental press, activity analysis, grading, approaches to change and other foundation concepts are linked to occupational science. How these coalesce into a professional focus and a profession completes the content. *Prerequisite:* Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or by permission of the program director.

OT 538. Administrative Functions for OTs. 3.00

This course provides an introduction to the management functions, tasks, roles and responsibilities as they are carried out in health and human service organizations. Discussion of emerging issues impacting health care practitioners is provided. Supervisory issues specific to the occupational therapist will be explored. *Prerequisite:* Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or by permission of the program director.

OT 540. The Occupational Therapy Process. 3.00

The occupational therapy process is taught. Types, purposes and methods of assessment are taught as the initial and defining step in the therapeutic process. Problem setting, client-centered goal development, intervention and appropriate termination of services are covered. Documentation of the process is also included. *Prerequisite:* Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or by permission of the program director.

OT 555. Level I Fieldwork One 1.00

This course provides an opportunity for the student to gain clinical experience serving clients with psychosocial conditions in the areas of education, health or human services. This clinical experience is designed to enrich didactic course work through directed observation and participation in selected aspects of the occupational therapy process. *Prerequisite:* Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or permission of the program director.

OT 560. Sensorimotor Foundations of Occupational Engagement. 3.00

The foundations of sensory processing and motor response allow the human to engage in purposeful and meaningful occupations. The important components of movement and behavior provide the underlying construct for much of occupational engagement. Normal and abnormal sensorimotor processing is presented with particular emphasis on how dysfunctions in these areas impact occupational engagement. *Prerequisite:* Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or permission of the program director.

OT 561. Therapeutic Media in Occupational Therapy. 2.00.

The use of therapeutic media has had a profound influence on the practice of occupational therapy. This course will analyze the historical, theoretical and contemporary use of therapeutic media and how it is utilized in intervention across client populations of all ages. Methods of adaptation and compensatory strategy effectively utilized to complete tasks will be examined. Contextual issues regarding media use pertaining to physical, cultural, personal and social factors will be discussed. *Prerequisite:* Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or permission of the program director.

OT 580. Occupational Dysfunction - Cause and Impact. 3.00

Reasons for occupational dysfunction in the areas of development, trauma, disease, and degenerative and environmental conditions are examined in relation to their specific pathology and their effect on human occupational performance. *Prerequisite:* Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or permission of the program director.

OT 585. Psychosocial Perspectives in Occupational Therapy Practice. 3.00

This course will provide an overview of psychosocial conditions that impact client function in the areas of occupation, performance skills and performance patterns. Occupational therapy assessment and intervention from an individual and group treatment standpoint will be examined as it contributes to the interdisciplinary process. A historical overview of occupational therapy in behavioral health service provision will be covered that will review traditional and contemporary treatment and provider settings. *Prerequisite:* Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or permission of the program director.

OT 590. Foundations of Research in Occupational Therapy. 3.00

The core research course introduces the student to the reasons, types and processes of research. Exposure to critical review of published research, specific emphasis on evidence based practice and the use of research in clinical decision-making is emphasized. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum or permission of the program director.*

OT 591. Occupational Therapy Tutorial I 1.00

Tutorial I is a small group case-based discussion seminar, facilitated by a clinical tutor who is an occupational therapist. Students research and discuss clinical cases related to content that is integrated from all courses that semester in the occupational studies concentration. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum or permission of the program director.*

OT 600. Assistive Technology in Occupational Therapy Practice. 3.00

The focus of this course is to provide an overview of the selection and use of assistive technology in rehabilitation to improve client function. High and low technology devices will be examined that apply to clients across the life span. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum or permission of the program director.*

OT 610. Occupational Therapy Intervention in Pediatrics. 3.00

Designed to provide an overview of occupational therapy in pediatrics, this course emphasizes the child and their family in context of environment and culture. The effect of disability on occupational development and performance frames the clinical reasoning used in decision making. Assessment, intervention planning and implementation, including intervention techniques, from a variety of theoretical perspective will be explored. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or permission of the program director.*

OT 620. School Based Practice. 2.00.

An overview of occupational services provided under the Individuals with Disabilities Education Act frames the content of this course. Understanding the school as an institution with a mission and culture, working in teams and supporting educational objectives and achievement are stressed. The early intervention programs as designed under IDEA are included. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the program or permission of the program director.*

OT 630. Evidence Based Practice. 3.00

Evidence based practice is considered to be the foundation and standard regarding clinical performance in the health and medical fields. This course introduces the student to the methodology of evidence based research and its applicability to occupational therapy. The content of this course builds on knowledge gained in the introductory research course (OT 590). *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum or permission of the program director.*

OT 640. Occupational Therapy Intervention Throughout Adulthood. 4.00.

This course will explore the role of the occupational therapist in providing services to clients in early, middle and later adulthood. Functional performance relating to areas of occupation, performance skills, performance patterns, contexts, activity demands and client factors will be analyzed. Theoretical approaches and evidence based intervention strategies will be examined. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or permission of the program director.*

OT 645. Level I Fieldwork Two 1.00

The focus of this course provides an opportunity for the student to gain clinical experience serving pediatric and adolescent clients in the areas of education, health and human services. This clinical experience is designed to enrich didactic course work through directed observation and participation in selected aspects of the occupational therapy process. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or permission of the program director.*

OT 651. Community and Health Practice in Occupational Therapy. 4.00.

As a result of the continued emphasis on health promotion and prevention, it is important for the occupational therapist to be cognizant of community health and human service agencies and how they serve the needs of individuals with special needs. This course will expose the student to community based models of service provision and provide interaction with local agencies. A proposal for an occupational therapy based program will be developed and the process for securing external funding (that can serve as a fiscal resource for practice) will be examined. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or permission of the program director.*

OT 655. Level I Fieldwork Three 1.00

This course provides an opportunity for the students to gain clinical experience serving clients with orthopedic or neurological conditions in the areas of education, health or human services. This clinical experience is designed to enrich didactic course work through directed observation in selected aspects of the occupational therapy process. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or permission of the program director.*

OT 663. Policy Analysis and Systems of Service Provision. 3.00

Federal, state and local laws and regulations related to health and human services are identified and their impact on occupational therapy practice is examined. Particular emphasis is placed on access to services, systems of services and payment for services. The role of advocacy in change is emphasized. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum or permission of the program director.*

OT 665. Level II Fieldwork One. 6.00

This supervised 12-week fieldwork external affiliation provides in-depth experience in delivering occupational therapy services on site at a hospital, community agency or human service setting. Students demonstrate an ability to evaluate, treat, document and discharge clients. Professionalism, clinical reasoning skills and communication with clients, significant others and professional colleagues are enhanced. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or permission of the program director.*

OT 675. Level II Fieldwork Two. 6.00

Students participate in a second 12-week in-depth supervised fieldwork affiliation in a different practice setting such as a hospital, community agency or human service settings. Students demonstrate increased independence in evaluating, treating, documenting and discharging clients. Professionalism, clinical reasoning and communication skills are further enhanced. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum, or permission of the program director.*

OT 680. Independent Study in Occupational Therapy. 3.00

This course provides an opportunity for the student to explore theoretical, clinical and evidence based practice concepts related to experience gained from both didactic and fieldwork education in greater breadth and depth. Exploration and dissemination of current health and human services professional literature will be emphasized as students examine the efficacy of traditional and contemporary practice approaches. *Prerequisite: Admission to the occupational therapy program and successful completion of all previous courses in the curriculum or permission of the program director.*

OT 691. Occupational Therapy Tutorial Group II 1.00

This tutorial course is a continuance of the small group case-based discussion seminar process facilitated by a clinical tutor who is an occupational therapist. Students research and discuss clinical cases related to content that is integrated from all courses that semester in the occupational therapy program. *Prerequisite: Satisfactory completion of all previous program course work or permission of the program director.*

OT 692. Occupational Therapy Tutorial Group III 1.00

This tutorial course is a continuance of the small group case-based discussion seminar process facilitated by a clinical tutor who is an occupational therapist. Students research and discuss clinical cases related to content that is integrated from all courses that semester in the occupational therapy program. *Prerequisite: Satisfactory completion of all previous program course work or permission of the program director.*

Physician Assistant

PA 510. Physical Diagnosis I. 4.00.

This is the first in a two-course series that presents fundamental concepts in the physician assistant/patient relationship, skills needed to conduct complete medical histories and physical examinations of patients of all ages, and methodologies commonly used to communicate medical information. *Prerequisite: Admission to physician assistant program, or permission of program director.*

PA 511. Physical Diagnosis II. 3.00

This is the second in a two-course series that presents fundamental concepts in the physician assistant/patient relationship, skills needed to conduct completed medical histories and physical examinations of patients of all ages, and methodologies commonly used to communicate medical information. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 520. Clinical Medicine I. 6.00

This is the first of a two-course series that examines the etiology, presentation, diagnosis and treatment of diseases and disorders common to adults seen in primary care physician assistant practice. This series serves as preparation for the clinical rotations in internal medicine, family medicine, emergency medicine and surgery. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 532. Pharmacology I. 4.00.

This is the first of two courses that provides the base of information necessary for clinical prescribing of medications. It includes pharmacokinetics, pharmacodynamics and pharmacotherapeutics. Within each class of therapeutic drugs, the course examines drug actions, interactions, reactions and contraindications. The course will also include principles of prescribing and patient compliance. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 540. The Physician Assistant Profession 1.00

This course explores the principles of the PA profession, its history and place in the spectrum of health care professions. Economic, legal and societal factors influencing the profession are also discussed. *Prerequisite: Admission to physician assistant program, or permission of program director.*

PA 551. Medical Biostatistics. 3.00

This course is designed to provide the physician assistant student with skills to understand research design, analyze research information and apply it to clinical practice. Emphasis in this course will be placed on basic biostatistical concepts, literature searches and analysis. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 621. Clinical Medicine II. 5.00

This is the second of a three-course series that examines the etiology, presentation, diagnosis and treatment of diseases and disorders common to adults seen in primary care physician assistant practice. This series serves as preparation for the clinical rotations in internal medicine, family medicine, emergency medicine and surgery and includes workshops to support the diagnosis and treatment of selected disorders. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 622. Women's Medicine. 2.00.

This course provides an introductory knowledge base in women's medicine. Through a series of presentations it prepares students for obstetric and gynecologic conditions encountered during clinical rotations. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 623. Pediatric Medicine. 2.00.

This course provides an introductory knowledge base in pediatric medicine. Through a series of presentations it prepares students for pediatric medical conditions encountered during clinical rotations. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 624. Behavioral Medicine. 2.00.

This course provides an introductory knowledge base in behavioral medicine. Through a series of presentations it prepares students for behavioral medicine conditions encountered during clinical rotations. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 625. Health Promotion and Disease Prevention 1.00

This course presents strategies that physician assistants employ in promoting health and well-being among the people they serve. It also examines public health strategies focused on early discovery of disease, prevention of disease and stopping the spread of disease. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 626. Clinical Medicine III. 5.00

This is the third of a three-course series that examines the etiology, presentation, diagnosis and treatment of diseases and disorders common to adults seen in primary care physician assistant practice. This series serves as preparation for the clinical rotations in internal medicine, family medicine, emergency medicine and surgery and includes workshops to support the diagnosis and treatment of selected disorders. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 630. Diagnostic Methods I. 2.00.

This is the first of a two-course series the presents the clinical laboratory tests used to detect and monitor common diseases and disorders. It focuses on selecting and interpreting the appropriate tests for each body system as well as performing selected tests. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 631. Diagnostic Methods II. 2.00.

This is the second course in a two-course series that presents the clinical laboratory tests used to detect and monitor common diseases and disorders. It focuses on selecting and interpreting the appropriate tests for each body system as well as performing selected tests. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 633. Pharmacology II. 3.00

This is the second of two courses that provide the base of information necessary for clinical prescribing of medications. It includes pharmacokinetics, pharmacodynamics and pharmacotherapeutics. Within each class of therapeutic drugs, the course examines drug actions, interactions, reactions and contraindications. The course will also include principles

of prescribing and patient compliance. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 642. Transition to Physician Assistant Practice 1.00

This course examines issues related to the shift from the role of the a PA student to that of a practicing PA. Topics include medical liability and risk management, business aspects of clinical practice, credentialing processes and career development. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 643. Values and Ethics in Medicine. 3.00

This course provides an overview of values, conduct and professional ethics as they apply to medical practice. Legal implications are also covered. The focus is on major principles and methodologies that guide clinicians in ethical decision-making as they encounter situations common to primary care practice. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 652. Clinical Problem Solving. 3.00

This course is designed to provide the physician assistant student with skills to understand research design, analyze research information and apply it to clinical practice. The emphasis in this course is placed on the use of evidence-based medicine in clinical decision-making. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 653. Research Design and Implementation 1.00

This course is designed to provide the physician assistant student with skills to understand research design, analyze research information and apply it to clinical practice. In this course, students will design a capstone project that will be finalized and presented in the subsequent course PA 654. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 654. Capstone Project. 2.00.

This course is designed to provide the physician assistant student with skills to understand research design, analyze research information and apply it to clinical practice. In this course, students will complete and present the capstone project initiated in PA 653. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 659. Health Care Environment. 3.00

This is a survey course examining the U.S. health care system, federal and state health policy, and public and private providers. Comparisons of the U.S. system will be made with other systems in the industrialized world. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 670. Elective Clinical Rotation. 2.00.

This four-week clinical rotation is devoted to an area of study of the student's choosing and the faculty's approval. It might be additional time in a specialty already introduced through another rotation, a different medical specialty of interest or a non-clinical area associated with the PA profession such as education, professional practice issues, etc. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 671. Family Medicine Clinical Rotation I. 2.00.

This is a four-week clinical rotation in family medicine with a board certified family practice provider. The student gains knowledge, experience and skill in interviewing and examining patients of all ages, diagnosing and treating disorders, and educating and counseling patients and families through participation in these activities while under the supervision of an experienced clinician practicing family medicine. The course also includes assigned reading and exercises. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 672. Primary Care Clinical Rotation. 2.00.

This is a four-week clinical rotation in primary care. The student gains knowledge, experience and skill in interviewing and examining patients of all ages, diagnosing and treating disorders, and educating and counseling patients and families through participation in these activities while under the supervision of an experienced clinician practicing primary care. The course also includes assigned reading and exercises. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 673. Internal Medicine Clinical Rotation I. 2.00.

This is the first of two four-week clinical rotations in internal medicine. The student gains knowledge, experience and skill in interviewing and examining adults, diagnosing and treating disorders, and educating and counseling patients through participation in these activities while under the supervision of an experienced clinician practicing internal medicine. This course also includes assigned readings and exercises. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 674. Internal Medicine Clinical Rotation II. 2.00.

This is the second of two four-week clinical rotations in internal medicine. The student gains knowledge, experience and skill in interviewing and examining adults, diagnosing and treating disorders, and educating and counseling patients through participation in these activities while under the supervision of an experienced clinician practicing internal medicine. This course also includes assigned readings and exercises. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 675. Pediatrics Clinical Rotation. 2.00.

During this four-week clinical rotation the student gains knowledge, experience and skill in interviewing and examining children, diagnosing and treating disorders, and educating and counseling children and parents through participation in these activities while under the supervision of an experienced clinician practicing pediatric medicine. The course also includes assigned readings and exercises. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 676. Obstetrics and Gynecology Clinical Rotation. 2.00.

During this four-week clinical rotation the student gains knowledge, experience and skill in interviewing and examining women, diagnosing and treating disorders, and educating and counseling women through participation in these activities while under the supervision of an experienced clinician practicing obstetric and gynecologic medicine. The course also includes assigned readings and exercises. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 677. General Surgery Clinical Rotation. 2.00.

During this four-week clinical rotation the student gains knowledge, experience and skill in interviewing and examining patients, diagnosing and treating disorders, and educating and counseling patients with surgical problems through participation in these activities while under the supervision of an experienced clinician practicing surgery. The course also includes assigned readings and exercises. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 678. Emergency Medicine Clinical Rotation. 2.00.

During this four-week clinical rotation the student gains knowledge, experience and skill in interviewing and examining patients, diagnosing and treating disorders, and educating and

counseling patients with emergent problems through participation in these activities while under the supervision of an experienced clinician practicing emergency medicine. The course also includes assigned readings and exercises. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 679. Behavioral Medicine Clinical Rotation. 2.00.

During this four-week clinical rotation the student gains knowledge, experience and skill in interviewing and examining patients, diagnosing and treating disorders, and educating and counseling patients and family members through participation in these activities while under the supervision of an experienced clinician practicing behavioral medicine. The course also includes assigned readings and exercises. *Prerequisite: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

Political Science

POSC 540. Post-Conflict Societies. 3.00

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 602. Politics of European Culture and Identity. 3.00

This course examines the dynamics of cultural identity in Europe. It canvasses alternative theoretical approaches to identity (primordialism, instrumentalism, constructivism) and addresses the interplay among sub-national, national, and supranational identities in various European states. The course also considers the ways that political actors express and modify identities in an enlarging and increasingly multi-cultural Europe.

POSC 603. The Political Institutions of the European Union. 3.00

This course is a comprehensive consideration of the EU's institutions and the relationships among them. It analyzes the roles of the EU's institutions and advisory bodies and considers the ways that executive, legislative, judicial, and advisory institutions interact. The course also engages debates about the "democratic deficit" in Europe and considers whether changes in the Union's institutional structure might increase the quality of European democracy.

POSC 604. Policy-Making Processes. 3.00

This course examines policy cycles and illuminates the range of general and sector-specific policy processes that take place in the EU and other complex decision-making environments. The course analyzes the structures of policy regimes and the ways that those structures affect the behaviors of diverse policy actors.

POSC 605. Comparative European Politics. 3.00

This course examines the functioning of Europe's national political systems. It focuses on state formation, nation building, models of democracy, territorial governance, electoral systems, party systems, legislative-executive relations, state-society dynamics, and other core elements of national governance. The course involves analysis of similarities and differences among national political models and consideration of Europeanization's effects on national governance.

POSC 620. The EU: Contemporary Issues and Controversies. 3.00

This course offers a deep look into contemporary issues and debates in EU politics. The particular subject matter changes from semester to semester; contemporary issues include the EU Constitutional Treaty, enlargement to eastern Europe, relations with Turkey, and EU foreign policy. Regardless of its specific focus, the course considers the historical background of the debate, the positions of different member-states and policy players, and the likely future of the issue. The course involves guest lectures from involved policy players and requires active engagement with contemporary media coverage and scholarly literature.

POSC 630. Topics in U.S. Government. 3.00

In-depth exploration of specialized topics in U.S. government and politics. The topical area of each section of this course will be clarified in its online listing.

POSC 631. U.S. Congress. 3.00

An analysis of the nature of political representation, institutional development of the national legislature, organizational structures, parliamentary procedures, and relationships with the executive and judiciary branches and with interest groups, political parties, and the media.

POSC 636. Public Policy. 3.00

This course will provide students with a set of conceptual frameworks with which to analyze the nature and resolution of public problems. We will conduct an in-depth examination of the political context within which public policy agendas are set, alternatives are weighed, decisions are formulated, and outcomes are implemented.

POSC 637. Interest Groups & Public Policy. 3.00

An analysis of the origin, maintenance, and mobilization of organized interests, the central role they play in the American system of government, and their influence on the public policy process.

POSC 640. Policy Analysis and the European Union. 3.00

This course offers an intensive immersion into the methods and concepts of policy analysis, with emphasis on applications involving European affairs. It introduces students to various techniques in policy forecasting, monitoring, and evaluation while discussing their potential application to policy decision-making, policy advocacy, and policy implementation. Students apply those techniques in case-based projects.

POSC 641. Topics in Economic and Social Policy. 3.00

In-depth exploration of specialized topics in EU economic and social policy. The topics for each semester will vary and may include the single market, economic and monetary union, competition policy, social policy, agricultural policy, regional policy, environmental policy, energy policy, and research and development policy.

POSC 642. Topics in Foreign Policy and Internal Security. 3.00

In-depth exploration of specialized topics in EU foreign policy and internal security policies. The topics for each semester will vary and may include European Union foreign policy, security and defense policy, anti-terrorism policy, immigration policy, asylum policy, human rights promotion, efforts against human trafficking, and policies regarding the protection of personal data.

POSC 643. The Transatlantic Relationship and the Challenges of Globalization. 3.00

This course analyzes the connections between North America and Europe. It examines the transatlantic trade and investment relationship, the transatlantic security relationship, US/EU approaches to specific global challenges and governance regimes, and the ways that developments in other world regions affect transatlantic dynamics. Students pursue transatlantic topics of interest within the policy track of specialization.

POSC 644. Research in Policy Dynamics. 3.00

This course involves scrutiny of policy proposals from their conception through their ultimate fate. Students gain familiarity with specialized databases in multiple policy-making systems. The course promotes familiarity with alternative ways of conceptualizing, organizing, publicizing, and tracking the evolution of policy proposals and policy-relevant data.

POSC 665. Governance and Stabilization. 3.00

This course will apply political science research and theory to the role of counterinsurgency and post-conflict operations in providing governance and stabilization. It will examine current military and political strategies in light of lessons learned from past operations.

POSC 690. Tutorial in EU Policy Studies. 6.00

A tutorial requiring students to pursue one of the following: a service learning project, a practicum or internship, or in-depth original research. Students integrate prior coursework and knowledge as they serve in government, NGO, or business settings or develop a thesis in their policy specialization area. They are further exposed to and directly maneuver within specific EU policies and procedures.

POSC 692. EU Seminar. 3.00

This is the capstone seminar for the program designed to address students' professional development. The course will integrate individual students' experiences and give further consideration to topical issues in the European Union. It seeks to build students' professional networks and to aid their transition into the professional realm. Coursework includes speakers, round table discussions, research colloquia and study tours.

Psychology

PSYC 501. Workshop in Psychology 1.00 - 3.00

Designed to provide a study of a particular topic of interest in psychology. *Prerequisite: Permission of department head.*

PSYC 525. Role and Function of the School Psychologist. 3.00

Provides an understanding of the organization and operation of public schools and the educational and mental health practice settings as well as legal and ethical issues and responsibilities with which a school psychologist must deal.

PSYC 527. Psychological Foundations of Education. 3.00

Psychological theories and research applied to classroom and school settings.

PSYC 530. The Psychology of Child Abuse and Neglect. 3.00

Review of current psychological literature on child abuse and neglect including identification, etiology, treatment, prevention and legal aspects. Family violence issues are also discussed.

PSYC 550. Sport and Performance Psychology. 3.00

This course focuses on theoretical, research and applied issues in sport and performance psychology. The emphasis of the course will be on gaining an understanding of the relationship between psychological variables and performance in sport and other performance domains (e.g., performing arts, military). Selected readings in sport and performance psychology will be explored.

PSYC 600. Introduction to Measurement and Statistics. 3.00

An introduction to measurement and statistical tools used in conducting research. Specific topics include: reliability and validity; research methods and statistical analysis; quantitative and qualitative methods; needs assessment and program evaluation; use of technology; and legal and ethical issues of research.

PSYC 601. Special Topics in Psychology 1.00 - 3.00

In-depth study of current topics in the field of psychology. Content will vary depending on the topic and instructor. May be repeated for different special topics. *Prerequisite: Permission of instructor.*

PSYC 602. Psychological Research Methods. 3.00

This course focuses on the methods and strategies used to conduct scientifically sound research in psychology. Primary attention will focus on choosing research questions; developing testable hypotheses; designing and conducting research; describing, analyzing and evaluating data; and effectively communicating research findings.

PSYC 604. Computer-Assisted Data Management and Analysis. 3.00

This course provides an introduction to Excel, SPSS and SAS. The first two weeks of the course cover the use of Excel to perform calculations, obtain descriptive statistics and create a wide variety of graphs. In the remainder of the course, students are instructed on how to use syntax in SAS and SPSS to a) read in and save out different file types, b) create new variables and manipulate the values of existing variables, c) screen data, clean data and perform basic analyses, and d) restructure, merge and concatenate files. More advanced topics include the use of do loops, macro variables and macros to streamline tasks. *Prerequisite: Completion of an undergraduate or graduate introductory statistics course and permission of instructor.*

PSYC 605. Intermediate Inferential Statistics. 3.00

Provides an understanding of types of research, inferential statistics and research report development. Special emphasis on experimental designs, power analysis, analysis of variance, multiple comparisons and effect sizes. *Prerequisite: Permission of instructor.*

PSYC 606. Measurement Theory. 3.00

Measurement applications of classical test score theory, generalizability measurement theory, scale construction concepts, test bias, standard setting techniques and item response theory. *Prerequisite: PSYC 605.*

PSYC 607. Assessment Procedures in Counseling. 3.00

A study of individual and group approaches to assessment and evaluation. Activities include administering, scoring and interpreting tests of ability, interest, personality and achievement for both children and adults. Students also assess case studies, perform a self-analysis and review selected assessment procedures. Computer-assisted assessment and ethical issues are addressed. *Prerequisite: PSYC 600 or permission of instructor.*

PSYC 608. Multivariate Statistical Methods in Psychology. 3.00

Continuation of PSYC 605, with emphasis on multivariate analyses, including multiple regression, discriminant analysis and MANOVA. *Prerequisite: PSYC 605.*

PSYC 609. Applied Research Methods. 3.00

Provides an understanding of applied research methods, including qualitative research, quasi-experimental designs and program evaluation. *Prerequisite: PSYC 605.*

PSYC 610. Principles of Behavior Analysis. 3.00

This course examines the science and practice of applied behavior analysis, which focuses on how environmental events influence the development and change of behavior repertoires, emphasizing the knowledge and skills necessary to plan, implement and assess interventions for behavior problems in a variety of settings including health and human services, education, business and industry, and with individuals from diverse populations. *Prerequisite: Permission of instructor.*

PSYC 612. Personality Theories. 3.00

Major theories of personality, including historical and philosophical assumptions underlying them, with a consideration of research stimulated by these theories.

PSYC 613. Cognitive Science. 3.00

Examines a wide range of human cognitive processes including pattern recognition, attention, memory, language and decision making. The course emphasizes research methods, empirical findings and applications in selected areas.

PSYC 614. Advanced Developmental Psychology. 3.00

An overview of the theories, research and applications relevant to the development of behavior and mental processes throughout the life span.

PSYC 616. Social Psychology. 3.00

An advanced study of the research and theory of the way an individual's social behavior is influenced by the behavior and attitudes of other individuals.

PSYC 618. Social and Emotional Development. 3.00

An examination of how developmental psychologists collect and interpret data; how theory guides research and practice. Topics include early determinants of behavior; identity development; prosocial and antisocial behavior; family, peers and schools. Exemplars, such as attachment, are used to show how research, theory, culture and clinical practice shape a topical area. *Prerequisite: Permission of the instructor.*

PSYC 623. Workshop in Psychopharmacology. 2.00. – 3.00

This is an introductory course designed to acquaint students with the fundamentals of psychotropic drugs. Basic topics in neurophysiology and psychopharmacology will be covered. The material will be presented with a clinical lifespan orientation. *Prerequisite: PSYC 625 is strongly recommended.*

PSYC 624. Neuroscience. 3.00

An analysis of brain/behavior relationships with an emphasis on neurological and biochemical mechanisms. Neuropsychological theory and psychopharmacology will be emphasized.

PSYC 625. Human Neuropsychology. 3.00

This course will serve as an introduction to the study of human neuropsychology. Students will learn about the basic structure and function of human nervous system, neurophysiology, neuroanatomy, neurochemistry and the methods used in neuropsychological research. Students will understand basic sensory and motor functions and more complex behaviors such as learning and memory, language, emotion, visuoperception and consciousness. This course is a prerequisite for Neuropsychological Assessment.

PSYC 626. Advanced Developmental Psychopathology. 3.00

An overview of child and adolescent behavior disorders and psychopathology with an emphasis on diagnostic and treatment issues.

PSYC 628. Introduction to Psychopharmacology. 3.00

This is an introductory course designed to familiarize students with the biochemical basis of neuropharmacology. This course covers functional neuroanatomy, neurochemistry, pharmacodynamics and pharmacokinetics. Students will critique the various neurobiological theories of psychiatric disorders and hypothesized mechanisms of action of commonly prescribed psychotropic drugs. Students will become familiar with commonly prescribed psychotropic medications. Therapeutic agents as well as drugs of abuse will be discussed. The psychological, social and cultural implications of psychotropic drug use will be integrated throughout the course. *Prerequisite: PSYC 624, PSYC 625 or equivalent and permission of the instructor.*

PSYC 630. Clinical Mental Health Counseling. 3.00

An introduction to the history, profession and practice of clinical mental health counseling. Specific topics include: intervening with individuals, groups, families; developing and evaluating programs; consulting with other professional helpers; promoting personal and systemic well-being; dealing with diverse clients; and addressing legal, ethical and professional identity issues.

PSYC 640. School Counseling. 3.00

An introduction to the history, theory, philosophy, principles, organization and personnel practices of school counseling. Specific topics include: developing and evaluating programs; intervening with individuals, groups, parents and schools; dealing with diverse students; and addressing legal, ethical and professional identity issues.

PSYC 641. Prevention and Intervention in Schools. 3.00

This course addresses foundational components of social-emotional learning in K-12 settings. The emphases will include practical application of research-based strategies and techniques, including mindfulness and related integrative practices. *Prerequisite: PSYC 640 and permission of instructor.*

PSYC 642. Issues and Trends in K-12 Education. 3.00

This course covers the challenging issues and current trends involved in meeting the needs of diverse learners in schools. Specifically, the course content includes providing effective classroom management, serving students with special needs, and following legal and ethical policies in schools. *Prerequisite: PSYC 640 and permission of instructor.*

PSYC 645. Student Personnel Services. 3.00

A detailed study of student services offered in colleges and universities. Legal, ethical and professional identity issues are also examined.

PSYC 646. The American College Student. 3.00

An examination of developmental theory and review of the literature and research related to the American college student.

PSYC 649. Multiculturalism, Diversity and Difference: Theory, Research and Practice in Student Affairs. 3.00

An environment for students to cognitively and experientially explore issues of multiculturalism, diversity and differences as it relates to work in student affairs, student services and higher education through assignments, exercises, discussions, readings and reflection.

PSYC 650. Organization and Administration of Student Services. 3.00

A study of organizational and management theory/practice in higher education. Upon completion of the course, students will have an understanding of the college/university as an organization and the role that student service programs play in the mission of the institution. *Prerequisite: PSYC 645.*

PSYC 651. Supervision and Consultation Processes in Student Personnel. 3.00

This course will focus on the processes of supervision and consultation as they apply to student personnel management. Opportunities will be provided to make practical application of management knowledge and organization theories to personnel issues. *Prerequisite: PSYC 650.*

PSYC 660. Counseling Theories. 3.00

A study of the philosophy and principles of various schools of counseling, and the techniques employed in the counseling process by practitioners in each of these schools.

PSYC 661. Counseling Techniques. 3.00

An opportunity to learn fundamental counseling skills that form the foundations of successful counseling practice. Students develop these skills through experiential learning activities; directed reading assignments, discussions and lectures; practice in small groups; and participation in critiques of videotaped microcounseling sessions. *Prerequisite: Permission of instructor.*

PSYC 663. Substance Abuse Counseling. 3.00

A study of substance abuse to include related personal, social and physiological factors, and methods of rehabilitation and counseling for the chemically dependent. *Prerequisite: PSYC 515 or equivalent.*

PSYC 664. Counseling Process. 3.00

An experiential study of the relationship between counselor and client. Explores the phases of relationship from initiation to termination, including predictable crises and issues which normally arise. Analysis of resistance, transference and counter transference, dependency and termination issues will be discussed. Attention will also be given to gender and diversity issues. *Prerequisite: PSYC 660, PSYC 661 or permission of instructor.*

PSYC 665. Group Counseling. 3.00

A study of the theories, techniques, dynamics, process and practice of group counseling. Students become members of a laboratory group and also conduct research into issues of group counseling. Each student pairs with a partner, creates an intervention plan and facilitates the group process. *Prerequisite: PSYC 660 and PSYC 661 or permission of instructor.*

PSYC 668. Couple and Family Systems. 3.00

A study of the dynamics of couple and family living, focusing on social change, social stratification, mate selection, marriage, divorce, child rearing, sexuality and individual behavior, and its effect on the family structure. *Prerequisite: Permission of instructor.*

PSYC 669. Career Development. 3.00

The impact of career choice throughout the life span is explored. Vocational theories and a variety of approaches to career decision-making will be introduced. Several career-related assessment instruments will be used to help students develop skills in administration and interpretation.

PSYC 674. Assessment I. 3.00

Students develop proficiency with administration, interpretation and reporting results of current cognitive ability measures and the issues in nondiscriminatory multicultural assessment. *Prerequisite: Permission of instructor.*

PSYC 680. Independent Study 1.00 - 3.00

An opportunity for independent study or research in an area of special interest. *Prerequisite: A written plan must be submitted and approved by a faculty supervisor, the student's program director and the department head prior to registration.*

PSYC 685. Psychopathology: Diagnosis and Intervention Planning. 3.00

Training and practice in the following: making reliable and valid diagnoses of mental disorders; appropriately addressing the ethical and cultural issues involved; performing collaborative diagnostic interviews; participating in effective case conferences; and planning interventions to achieve therapeutic goals. *Prerequisite: PSYC 600, PSYC 661 or permission of instructor.*

PSYC 690. Experimental Analysis of Behavior. 3.00

The experimental analysis of behavior (EAB) involves identifying functional relations between behavior and its controlling variables, primarily in individual organisms, and typically under rigorous laboratory conditions. Focus will be on the findings from empirical research with some attention to extensions of the fundamental principles of behavior to applied behavior analysis (ABA) and to the underlying philosophy for both EAB and ABA, radical behaviorism.

PSYC 695. Practicum 1.00 - 6.00

Provides a variety of supervised field, laboratory or school experiences. Course will be graded on an S/U basis. *Prerequisite: Permission of instructor.*

PSYC 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

PSYC 699. Thesis Continuance 1.00 - 2.00

Continued study, research and writing in the area of thesis concentration. (This course does not count towards fulfilling the required hours for the degree; it may be repeated as needed. Students who have registered for six hours of thesis credit but have not finished the thesis must be enrolled in this course each semester until they complete the thesis.)

PSYC 700. Thesis Research. 3.00 - 6.00

This course is graded on a satisfactory/unsatisfactory/in progress (S/U/I) basis.

PSYC 710. Counseling Strategies: Special Topics 1.00 - 3.00

Training and practice in the use of a specific counseling method. *Prerequisite: PSYC 660, PSYC 661 or permission of instructor*

PSYC 713. Professional Practice Issues in Rural School Psychology Practice. 3.00

This course is designed to investigate the unique professional issues associated with the provision of school-based psychological services in rural settings through a paradigm of practice geared toward social justice. *Prerequisite: PSYC 749 and permission of the instructor.*

PSYC 727. Instructional Interventions: Science and Practice. 3.00

Principles and research relevant to teaching and learning in the schools. Emphasis will be placed on the culture/organization of the schools, curriculum and interprofessional collaborations. The psychology of reading will be highlighted, including assessment, interventions and work with English Language Learners. *Prerequisite: Permission of instructor.*

PSYC 748. Gender Issues in Counseling. 3.00

An exploration of gender issues as they relate to counseling theories and techniques. The social construction of gender roles as well as the gendered nature of society are discussed. Implications for working with women, men, gay/lesbian/bisexual, and transgender individuals are addressed. *Prerequisite: PSYC 660, PSYC 661 or permission of instructor.*

PSYC 749. Multicultural Perspectives in Intervention. 3.00

Offers a cognitive and experiential study of sociological and psychological variables, such as race, gender and socioeconomic status, that influence the professional helping relationship. Culturally relevant models of counseling theory and practice are presented. *Prerequisite: Permission of instructor.*

PSYC 750. Consultation and Intervention Techniques. 3.00

Provides the knowledge and skills necessary to engage in consultation and systems level intervention within educational and mental health settings. *Prerequisite: Permission of the instructor.*

PSYC 751. Psychotherapy with Children and Adolescents. 3.00

Theoretical and cognitive bases for understanding frequently used therapeutic strategies and techniques. Specific sections will focus on general practices and procedures in psychotherapy, and on therapeutic strategies for children, adolescents and families.

PSYC 752. Theory and Practice of Play Therapy. 3.00

An introduction to the historical and contemporary context of play therapy theories and methods. Examination of cultural influences, ethical issues and outcome research in play therapy. *Prerequisite: PSYC 660, PSYC 661 or permission of instructor.*

PSYC 755. Cognitive and Behavioral Interventions. 3.00

An overview of the theoretical and applied aspects of operant behavior modification and cognitive behavior therapy. The course focuses on applications with children, adolescents and their families in educational and mental health settings.

PSYC 760. Supervision and Consultation for Counselors. 3.00

The course includes an introduction to concepts, processes, and styles of supervision. It offers students the opportunity to gain experience in providing supervision to other counselors in training. The course also provides students with the knowledge and skills necessary to engage in consultation, negotiation/mediation and systems level intervention in mental health and education settings. *Prerequisite: PSYC 660, PSYC 661, PSYC 664 or permission of instructor.*

PSYC 768. Couple and Family Counseling. 3.00

A study of the various approaches to couple and family counseling, focusing on theory, techniques and research that relate to the counseling process. *Prerequisite: PSYC 661 and PSYC 668 or permission of instructor.*

PSYC 770. Assessment and Public Policy. 3.00

Delineates and compares the history and role of assessment, accountability and quality assurance to the governance, funding and purposes of higher education; describes an implementation process of assessment for educational programs and services. *Prerequisite: PSYC 600.*

PSYC 777. Assessment II. 3.00

An advanced laboratory course for students in school psychology. Covers comprehensive evaluation of domains and abilities which relate to academic success. Enrollment is limited to allow individual instruction and supervision. *Prerequisite: PSYC 674 or permission of instructor.*

PSYC 778. Advanced Practicum 1.00 - 6.00

Provides a variety of supervised field experiences in schools and other settings. The student may re-enroll in this course for different types of practicum experiences. Course is graded on an S/U basis. *Prerequisite: Permission of instructor.*

PSYC 779. Assessment III. 3.00

Advanced students achieve basic understanding and competency in the administration and interpretation of personality assessment procedures most frequently used in school settings with children and adolescents. Enrollment is limited to allow individualized instruction and supervision. *Prerequisite: PSYC 606, PSYC 674, and PSYC 777 or permission of instructor.*

PSYC 790. Internship. 3.00 - 6.00

Provides a student with a supervised field experience. Students should contact their program director for specifics concerning the internship experience. Course will be graded on an S/U basis. *Prerequisite: Permission of program director.*

PSYC 799. Educational Specialist Research Project Continuance 1.00 - 2.00

Continued study, research and writing in the area of Educational Specialist research project. Course may be repeated as needed but does not count toward fulfilling the required hours for the degree. (Students who have registered for the maximum hours of PSYC 800, Educational Specialist Research Project, but have not finished the project must be enrolled in this course each semester until they complete the research project.)

PSYC 800. Educational Specialist Research Project 1.00 - 3.00

Opportunity for advanced applied research in an area of special interest to a school psychology or community counseling student in an Educational Specialist program. Specific course requirements are listed in the separate research project guidelines for school psychology and community counseling students. Course is graded on an S/U basis. Successful completion of the research project fulfills the comprehensive examination requirement for the School of Psychology educational specialist degree. *Prerequisite: Permission of program director.*

PSYC 803. Quasi-Experimental Research Designs and Propensity Score Analysis. 3.00

In this course, participants will thoroughly examine approaches to quasi-experimental research designs. Topics include, but are not limited to, quasi-experimental designs, threats to internal and external validity, causal inference, evidence-centered assessment design, matching and blocking methods, propensity score methods, and other related topics. Data analysis experience and a background in intermediate statistics are required. *Prerequisite: PSYC 605 or permission of instructor.*

PSYC 805. Single Case Experimentation. 3.00

This course examines the logic and practical considerations of experimentation in research using small numbers of subjects, as it relates to single case experimental designs, which demonstrate functional relationships between adjustments in independent variables and their effects upon dependent variables in repeated measures behavioral research.

PSYC 810. Advanced Multicultural Issues in Counseling. 3.00

Provides an advanced exploration of the issues and challenges of offering culturally competent therapeutic services, training and supervision. Students have an opportunity to apply multicultural concepts to various cultures, including those in rural communities. Interventions with diverse and underserved populations will be emphasized. *Prerequisite: Permission of instructor.*

PSYC 811. School Psychology: Developmental and Social Systems Perspectives. 3.00

Students achieve basic understanding and competency in conceptual and applied aspects of school psychology, ecological and socio-cultural perspectives on child development, mental health and education. Students advance skills in school-based assessment, consultation and interventions. Uses a systems-ecological approach that acknowledges multiple influences on child development and behavior. Focuses on role of culture in child development, education and mental health.

PSYC 812. Assessment Methods and Instrument Design. 3.00

This course covers reliability and validity issues associated with instrument and methodology design. Delineation of goals and objectives, assessment purposes, test and task specification, item/task development, pilot, review and maintenance procedures will be applied. Consideration of multifaceted validity and validation issues will be stressed throughout the process. *Prerequisite: PSYC 605, PSYC 606 or permission of instructor.*

PSYC 814. Performance Assessment. 3.00

The optimal use of tools that assess products and processes is explored within a variety of assessment contexts. This course focuses on the design, development and implementation of performance-based assessment. Task analysis and design, scoring rubric development and use, and assessment deployment are covered through critique and practice. Potential benefits offered by computer-based administration of performance assessments are introduced. Particular emphasis is given to validity issues throughout the course. *Prerequisite: PSYC 606.*

PSYC 816. Classical Test Theory and Generalizability Theory. 3.00

This course examines classical test theory and generalizability theory and their application to the practice of assessment. As a foundational level, model assumptions are explored and used to understand the development of different notions of reliability and dependability. At a practical level, statistical techniques developed from these two theories will be applied to develop and/or improve assessment practices. *Prerequisite: PSYC 606.*

PSYC 820. Exploratory Factor Analysis. 3.00

Methods of exploratory factor analysis and component analysis, including differences between factor and component analysis; assumptions and data preparation for factor/component analyses; determining the number of factors, rotation methods, computation of factor scores; factor analysis of noncontinuous data; and evaluation of factor analytic research. The course emphasizes the applications as well as mathematical models. *Prerequisite: PSYC 606 and PSYC 608.*

PSYC 822. Assessment in Early Childhood Special Education. 3.00

This course provides the student with exposure to screening assessment and diagnostic procedures utilized in the identification of handicapped students ages 0-5. A case study approach to diagnostics is emphasized. Family assessment is also an integral part of the course. *Prerequisite: Permission of the instructor and EXED 621 or equivalent.*

PSYC 825. Doctoral Seminar in Professional Psychology 1.00 - 3.00

This course covers issues and content designed to foster the development of the student's identity as a doctoral-level professional in the areas of measurement and assessment. Course is graded on S/U basis.

PSYC 826. Advanced Seminar in Developmental Psychopathology. 3.00

This course reviews at the doctoral level current research and theory regarding childhood disorders, their origins and their consequences for life span development, and the factors that mitigate against them. Specific topics include theories of development and psychopathology; taxonomy and diagnosis; longitudinal studies of continuity and change; development of depression, aggression and anxiety; and resilience.

PSYC 827. Categorical Data Analysis. 3.00

This course covers the basic statistical models and analytic techniques appropriate for categorical data. These include tests of goodness-of-fit, tests of association, and logistic and log-linear models. *Prerequisite: PSYC 604 and PSYC 605.*

PSYC 830. Structural Equation Modeling. 3.00

Exploratory and confirmatory factor analysis, path analysis and relevant aspects of measurement theory are introduced. In this context, several mathematical and technical issues about model fitting are presented: the statistical requirements for a model, estimators and estimation, model evaluation, model modification, software use and pertinent troubleshooting strategies. *Prerequisite: PSYC 606 and PSYC 608.*

PSYC 832. Item Response Theory. 3.00

This examines the use of item response theory models for test construction and ability estimation. Models for tests with dichotomous and polytomous items will be covered. Other topics for discussion include advantages and disadvantages of IRT relative to classical test theory, the detection of differential item functioning (or item bias) and the role of IRT in computer adaptive testing. *Prerequisite: PSYC 606.*

PSYC 835. Advanced Structural Equation Modeling. 3.00

This course is designed for students who wish to gain familiarity with structural equation modeling techniques that are not covered in an introductory course. These techniques are often considered advanced or cutting-edge. Emphasis is placed on those techniques that will be encountered most often in the literature and those that will prepare you to answer a wide variety of research questions. Topics include latent growth modeling, mixture models and modeling of categorical indicators *Prerequisite: PSYC 830.*

PSYC 836. Hierarchical Linear Models. 3.00

This course will illustrate how to use hierarchical linear models (HLMs) to answer research questions in education and the social sciences. Students will learn HLM through applied experiences with a variety of different hierarchical data structures (e.g., students within schools, patients within clinics), including longitudinal and met-analytic data. *Prerequisite: PSYC 608.*

PSYC 837. Advanced Item Response Theory. 3.00

This course covers advanced topics in item response theory (IRT). Because these topics represent the state of the art in IRT research, the course content is necessarily evolving. However, common topics include multidimensional IRT models, equating methods, assessment of differential item functioning and the use of IRT methods to develop computerized adaptive tests. *Prerequisite: PSYC 832.*

PSYC 840. Qualitative Research Design and Analysis. 3.00

This course is designed to give students an introduction to the philosophical, conceptual and practical basis of qualitative research. Provides an introduction to all phases of qualitative research design, developing research questions, doing data collection and analysis and writing a qualitative research proposal. *Prerequisite: Permission of instructor.*

PSYC 845. Missing Data Methods. 3.00

Recent developments in the analysis of data with missing cases. Topics covered include types of missingness (missing at random, missing completely at random and missing not at random), planned missingness designs, maximum likelihood, Bayesian and multiple imputation methods for dealing with missing data. Analyses for data that are not missing at random will also be covered briefly. *Prerequisite: PSYC 830.*

PSYC 850. Special Topics in Assessment and Measurement. 3.00

In-depth study of current topics in the field of assessment and measurement. Content will vary depending on the topic and instructor. May be repeated for different special topics. *Prerequisite: Permission of instructor.*

PSYC 852. Leadership, Consultation and Supervision. 3.00

An advanced course in models of consultation, supervision and leadership/management. *Prerequisite: Permission of instructor.*

PSYC 853. Advanced Supervision in Counseling. 3.00

Explores at the doctoral level the purposes, theoretical frameworks, models and related roles of clinical supervision. Also addresses legal, ethical and multicultural issues. The course includes practice learning and opportunities to develop a personal style of supervision. *Prerequisite: Permission of instructor.*

PSYC 855. Assessment Consultation and Practice. 3.00

This course provides guided opportunities for supervised application of sets of assessment skills and competencies with the development of professional self as an assessment practitioner. Students join with center faculty members to engage in ongoing assessment projects concerning at-risk students, alumni surveys, academic undergraduate and graduate degree programs, general education, academic program reviews and distance education programs. Ethics will be emphasized, spanning the continua of assessment practice from establishing consultation relationships, assessment design, data collection, analysis, maintenance and archiving of data, and report writing to presentation of findings.

PSYC 860. Advanced Counseling Theories. 3.00

This class is a laboratory experience which explores the phases of the therapeutic relationship between therapist and client. The framework for conceptualizing psychotherapy will be the integration of the interpersonal approach with a multi-model, systems orientation. Topics such as diversity, resistance, transference and countertransference will be discussed. *Prerequisite: Permission of instructor.*

PSYC 861. Advanced Counseling Techniques. 3.00

An in-depth skill development course at the doctoral level in counseling techniques for students who are seeking to refine their skills and make more explicit the theory that drives their counseling behaviors. The course is a laboratory experience in which students create counseling relationships *Prerequisite: Permission of instructor.*

PSYC 862. Leadership and Advocacy in Counseling. 3.00

Theories of leadership, advocacy models and multicultural issues as they relate to social change theories. Exploration of current topical and political issues in counseling and how these issues affect the counseling profession. The course also includes practice in developing leadership and advocacy skills. *Prerequisite: Permission of instructor.*

PSYC 863. Counselor Education. 3.00

An introduction to the major roles, responsibilities and activities of counselor educators. Includes instructional theory and methods, and addresses the ethical, legal and multicultural issues associated with counselor preparation training. *Prerequisite: Permission of instructor.*

PSYC 864. Processes of Psychotherapy. 3.00

A comprehensive exploration at the doctoral level of the major counseling theories, including their strengths and weaknesses, theoretical bases for efficacy, applicability to multicultural populations and ethical/legal considerations. Addresses the methods for evaluating counseling effectiveness and the current research base for counseling theories.

PSYC 865. Integrative Psychotherapy for Adults. 3.00

An advanced course surveying the major approaches to psychotherapy (e.g., psychodynamic, cognitive, behavioral and humanistic) in a manner designed to provide students with ways of integrating these approaches into a coherent theoretical model that can guide conceptualizations and interventions during the therapeutic process.

PSYC 866. Crisis and Emergency Services for Counselors. 3.00

A comprehensive introduction to the theory, research and practice of crisis and emergency services with individuals, families, institutions and communities. Ethical, legal and multicultural issues are addressed. *Prerequisite: Permission of instructor.*

PSYC 867. Advanced Diagnosis, Intervention and Treatment Planning. 3.00

This is the third course in an advanced sequence of training in integrative psychotherapy. An integrative lens is used to conceptualize, plan, implement and evaluate treatments in light of specific patient presentation and diagnosis (DSM, ICD). The empirical evidence-base pertaining to participant factors, developmental history, effective techniques, principles of relating and assessment of relevant outcomes are considered in context of specific case-based examples. *Prerequisite: PSYC 865 (May be waived with instructor consent), PSYC*

864 and PSYC 865.

PSYC 874. Cognitive Assessment. 3.00

Students achieve a basic understanding and competency in the administration and interpretation of intellectual and academic assessment procedures for children, adolescents and adults across a variety of setting and clinical areas. Issues of nondiscriminatory multicultural assessment will also be addressed. Students are also enrolled in a lab (PSYC 878) as part of this course. *Prerequisite: Permission of instructor.*

PSYC 876. Personality Assessment. 3.00

Students achieve a basic understanding and competency in the administration and interpretation of personality assessment procedures for children, adolescents and adults across a variety of settings. Issues of nondiscriminatory multicultural assessment will also be addressed. *Prerequisite: Permission of instructor.*

PSYC 878. Doctoral Practicum 1.00 - 6.00

Provides a variety of supervised field experiences for advanced, applied psychology doctoral students. Students may enroll for several types of practicum experiences (e.g., clinic, school, HDC). Course is graded on an S/U basis. *Prerequisite: Permission of instructor.*

PSYC 879. Doctoral Assessment Practicum. 2.00.

This course provides guided opportunities for supervised application of sets of assessment skills and competencies with the development of professional self as an assessment practitioner. Students join with center faculty members to engage in ongoing assessment projects concerning at-risk students, alumni surveys, academic undergraduate and graduate degree programs, general education, academic program reviews and distance education programs. Course will be graded on an S/U basis.

PSYC 880. Introduction to Child and Adolescent Neuropsychology. 3.00

This course will include a review of central nervous system (CNS) anatomy and physiology as it pertains to brain/behavior relationships and neuropsychological assessment. Emphasis is on providing a foundation for more intensive further evaluation and remediation within the school setting of children and adolescents surviving traumatic brain injury. *Prerequisite: Permission of the instructor.*

PSYC 881. Issues and Techniques in Research and Evaluation 1.00 - 3.00

Opportunity for applied research and/or program evaluation in areas of special interest. Students will participate as full members of a research team and assist with the design of a study. This course will serve as a basis for preparing students to develop the proposal for their doctoral research project. Course is graded on an S/U basis. *Prerequisite: PSYC 605 and PSYC 608 or equivalent, or permission of the instructor.*

PSYC 882. Doctoral Practicum in Counseling. 3.00

Doctoral-level supervised clinical counseling experience in a field setting relevant to the student's professional goals. Course is graded on an S/U basis. *Prerequisite: Permission of the instructor.*

PSYC 885. Workshop in Rorschach. 3.00

Gives an overview of current uses for the Rorschach Inkblot test in psychological assessment. Reviews the history and controversies surrounding the instrument. Reviews the Exner Comprehensive System and its psychometric strengths and weaknesses, and introduces the Rorschach Performance Assessment System. Students will review the fundamentals of administration, scoring, interpretation and report writing. *Prerequisite: PSYC 674.*

PSYC 888. Introduction to Neuropsychological Assessment. 3.00

An introduction to the practice of neuropsychological assessment. Students learn to administer, score and interpret common neuropsychological instruments; become acquainted with common neuropathological conditions which prompt a referral for neuropsychological assessment; and learn to write a comprehensive and comprehensible neuropsychological assessment report. Students learn about tests in class but must use outside time to practice administration. *Prerequisite: PSYC 625 or equivalent, with permission of instructor.*

PSYC 890. Doctoral Internship. 6.00

Supervised internship in a school and/or community agency approved by the program coordinator. Designed to meet APA internship guidelines. Course is graded on an S/U basis. *Prerequisite: Completion of all course work and permission of program committee.*

PSYC 891. Doctoral Assessment Internship. 3.00

Supervised assessment internship in a higher education, kindergarten through 12th-grade, business or health care setting that has been approved by the program coordinator. Typically involves the design and implementation of assessment strategies to meet the needs of the institution or agency. Course will be graded on an S/U basis. Can be taken for a second semester. *Prerequisite: Completion of all doctoral program course work, PSYC 878 and permission of the program committee.*

PSYC 892. Doctoral Internship in Counseling, Supervision, and Teaching. 2.00. - 6.00

Under supervision, participating in intensive capstone experiences enhancing skills and practices in three areas: counseling, supervision and counselor education. Experience is gained in field settings relevant to student's professional goals; includes clinical supervision and professional development. Course is graded on an S/U basis. *Prerequisite: Completion of all course work and permission of adviser.*

PSYC 895. Doctoral Practicum in College Teaching 1.00 - 3.00

This practicum course provides instruction, modeling and supervision in teaching college or professional level learners. Students will teach undergraduate courses in psychology and/or make professional presentations, receiving feedback and supervision from the instructor. *Prerequisite: Master's degree and permission of instructor.*

PSYC 899. Dissertation Continuance 1.00 - 2.00

Continued study, research and writing in the area of dissertation concentration. (This course does not count toward fulfilling the required hours for the degree; it may be repeated as needed. Students who have registered for six hours of dissertation credit but have not finished the dissertation must be enrolled in this course each semester, including summer, until they complete the dissertation.)

PSYC 900. Doctoral Dissertation. 6.00 - 12.00

Provides advanced research required of all doctoral candidates. Course is graded on an S/U basis. *Prerequisite: Completion of all course work and permission of program coordinator.*

Public Administration

PUAD 512. Seminar in Intergovernmental Relations. 3.00

Intensive examination of the dynamics of the federal system including the political, administrative and fiscal relationships among the various American governments. Grant writing will be addressed.

PUAD 560. Regionalism and Urban Management. 3.00

A study of the problems of urbanization and inter-jurisdictional externalities from a regional perspective. Regionalism will be examined as an approach to generating public policy to solve these problems..

PUAD 561. Education and Social Policy. 3.00

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.

PUAD 562. Social Welfare and Local Government Policy. 3.00

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.

PUAD 569. Philanthropy and Volunteerism. 3.00

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.

PUAD 570. Nonprofit Management. 3.00

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.

PUAD 571. Financial Management for Nonprofit Organizations. 3.00

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.

PUAD 571. Public Financial Management. 3.00

Explores financial management in public and nonprofit organizations by examining cash, debt and investment management; risk assessment; capital projects; and budgeting. Financial reporting, financial statements and auditing will also be considered as accountability and internal control mechanisms.

PUAD 572. Contract Management. 3.00

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.

PUAD 573. Economic and Community Development. 3.00

Study of the theory and practice of economic development and community planning. Topics include human capital development, infrastructure development, regionalism, public-private partnerships.

PUAD 574. Tools for Public Management. 3.00

This course is designed to introduce students to the practical tools that will enable them to deal with the challenges managers face in the nonprofit and public sector environment. The course is designed around a set of modules that public administrators must address on a regular basis.

PUAD 575. Grant Writing and Project Management. 3.00

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*

PUAD 583. Special Topics in Public Management. 3.00

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: Permission of the instructor.*

PUAD 584. Environmental Regulatory Policy and Politics. 3.00

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.

PUAD 605. Research Design for Policy Evaluation. 3.00

Application of social science methodology to program and policy evaluation. Research design and data collection, as well as planning techniques, are covered.

PUAD 606. Program Evaluation in Public Administration. 3.00

Application of systematic analysis to program and policy evaluation. Students will complete a computer-assisted research project. *Prerequisite: PUAD 605 or permission of instructor.*

PUAD 607. Policy Analysis. 3.00

This course is designed to help students cultivate the tools and techniques of public policy analysis. Students will examine approaches to policy analysis and assess the strengths and limitations of various methods for understanding contemporary social problems and policy challenges. The course is designed to strengthen problem-solving, analytic and research skills in defining and crafting solutions to such problems.

PUAD 615. Legal Environment of Public Administration. 3.00

Study of the constraints imposed on public administrators by law and judicial oversight. The course will address federal and state constitutions, judicial review, organizational and personal legal accountability, personnel law and procurement law.

PUAD 620. Foundations of Public Administration. 3.00

A study of public administration including the political process. Includes a theoretical introduction to the study of public administration and patterns of management and decision making. Serves as foundation course to the Master of Public Administration program.

PUAD 625. Public Organizational Behavior. 3.00

A study of contemporary issues and problems facing the public manager. Contemporary management systems, techniques and devices will be discussed and case studies will be extensively used.

PUAD 626. Strategic Planning and Management. 3.00

Advanced study of the strategic planning process, including mission and vision development, subordinate planning efforts, and integration with management and operational planning. Coverage of performance measurement, assessment systems, monitoring and evaluation, and program modification.

PUAD 627. Facilitating Collaborative Governance and Public Programs. 3.00

This course offers training and practice in facilitation skills needed to guide advocacy groups, organizations, governmental agencies and communities as they grapple with complex challenges, make informed choices for action and work together to establish and achieve collective goals. In addition, this course will consider how these processes are best integrated with and play a role in community, organizational and institutional structures and influence policy change.

PUAD 630. Seminar in Public Personnel Administration. 3.00

An inquiry into systems of employment found in United States governments and nonprofit organizations, the issues these systems raise for democracy, and the Constitutional and legal framework within which they operate.

PUAD 641. Public Budgeting. 3.00

Public budgeting practices and skills with an emphasis on the federal budget process. Topics include politics of the budget process, budget types and analytic techniques for budgeting

PUAD 650. Management in International Nongovernmental Organizations. 3.00

Study of management of non-governmental (NGO) organizations in international settings. Through readings, case studies and exercises, the course explores NGO governance, acquisition and management of resources, program management, performance measurement and accountability. *Prerequisite: Permission of the instructor.*

PUAD 651. Economics of the International Non-Profit Sector. 3.00

Introduces the non-economics graduate student to an economic perspective on non-profit organizations with regard to diverse international systemic environments. The conjunction of economics with political, institutional, ethical and sociological elements will provide the student with a comprehensive understanding of the central nature of economics to development. *Prerequisite: Permission of instructor.*

PUAD 652. Politics of International NGOs. 3.00

An examination of how changes in the political context provide distinctive challenges to international non-governmental organizations. The emphasis is on improving the ability of managers and service providers to adjust their organizations' decisions and operations in response to differences in national and subnational political dynamics. *Prerequisite: Permission of instructor.*

PUAD 653. Ethics and International NGOs. 3.00

This course studies the ethical issues posed by international non-governmental organizations (NGOs) in both theory and practice. Emphasis will be placed on the contemporary humanitarian enterprise, on the ethical considerations it raises, and on analytical and normative tools for addressing these concerns. *Prerequisite: Permission of instructor.*

PUAD 661. Civil Society and the Nonprofit Sector. 3.00

Explore the concepts, theory and research related to civil society. Understand the relationship between the nonprofit sector, civil engagement, social capital and democracy. Define the implications of these concepts for the nonprofit leader.

PUAD 662. Governance and Accountability of Nonprofit Sector Organizations. 3.00

Study of the structure, functions and composition of nonprofit boards and their relationship to organization management and performance. Explore the fiduciary, strategic and generative governance roles of boards and common problems associated with nonprofit governance. Assess proposals to improve board performance and accountability.

PUAD 663. Philanthropy and Volunteerism. 3.00

This course will examine the role of philanthropy and volunteerism in the nonprofit sector in the US and globally.

PUAD 680. Reading & Research. 3.00

Under faculty supervision, independent study of a specialized area of public administration. *Prerequisite: Permission of instructor.*

PUAD 692. Public Administration Capstone. 3.00

This capstone course, required of all graduate public administration students in their final spring semester, emphasizes professional and ethical application of core public management competencies. Course work includes a structured, individualized practicum project demonstrating technical knowledge and understanding of organizational, political and social contexts. *Prerequisite: Open to students who have completed 24 graduate credit hours or are entering their final spring semester in the MPA program.*

PUAD 696. Internship in Public Administration. 3.00 - 6.00

Supervised professional administrative experience with a public or non-profit agency. Credit for 200 or 400 hours of work is three or six credits. Assigned readings, reports and a research paper are required. *Prerequisite: Permission of instructor.*

PUAD 697. Internship in NGO Management. 6.00

A supervised professional administrative experience with a non-governmental organization. Requires 300 hours of work. Assigned readings, reports and a research paper are also required. *Prerequisite: Permission of instructor.*

PUAD 698. Comprehensive Continuance 1.00

All MPA students must remain enrolled in a minimum of 1 credit hour every fall and spring semester in order to remain enrolled in the program. Course may be repeated as needed.

School Administration

ADSU 540. Technology for Administrators. 3.00**ADSU 640. The Fundamentals of Educational Administration. 3.00**

Examines the fundamental principles and concepts of organizational theory, structure and climate. There is an emphasis on the administrative processes and professional ethics of leadership, motivation, decision making, communication, organizational change and strategic planning. The course offers opportunities to apply theory to professional practice through the use of case studies.

ADSU 641. School Law. 3.00

Acquaints teachers and prospective school administrators with the laws governing public education and the legal responsibilities and powers of state and local governing bodies and individuals. Emphasis is given to federal and Virginia statutes and case law affecting due process, liability, equal protection and the rights of teachers and students.

ADSU 642. Leadership for School-Community Relations. 3.00

The influence of the social and political structures and conditions on school leadership, personnel, programs and activities is explored. Strategies for interacting and cooperating with parents, community leaders, businesses and organizations for support in the effective attainment of school objectives and the educational goals of the community are emphasized.

ADSU 643. The Principalship. 3.00

Emphasis will be on instructional leadership and effective school management that promote positive student achievement, a safe and secure environment, and the efficient use of resources. Curriculum planning, scheduling, school improvement planning, assessment of student progress, school change and program evaluation will be key topics covered by this course.

ADSU 644. Supervision and Development of Personnel. 3.00

Concepts and approaches for planning and implementing activities for effective human resource management are explored. Theories and practices related to recruitment, development and appraisal of personnel are covered. Evaluation of personnel for the purpose of meeting school objectives and for professional development receives emphasis.

ADSU 652. School Finance and Business Management. 3.00

This course emphasizes the history and principles of public school financing and the roles of federal, state and local governments and agencies in financing public education. Taxation for school purposes, the economics of education, equity and disparity issues, budgetary concerns, strategic planning and procedures for school-site management are included.

ADSU 668. Internship for Principals. 3.00

Students spend a minimum of 200 hours over six months working under the supervision of a practicing school administrator and a university professor. The student should experience the full range of duties, problems and issues encountered by a school administrator, and receive developmental and evaluative feedback. Course graded on an S/U basis. *Prerequisite: Completion of 30 credits in the Educational Leadership Program or permission of adviser.*

ADSU 678. Full-Time Internship for School Administrators. 3.00

Candidates spend a minimum 90 full-time days working under the supervision of a practicing school administrator and a university professor. The candidate should experience the full range of duties, problems and issues encountered by an administrator and receive developmental and evaluative feedback. Course graded on an S/U basis.

Prerequisite: Attainment of a full-time administrative position and permission of adviser.

ADSU 680. Readings and Research 1.00 - 3.00

This course provides opportunities for directed readings and research in areas of special interest. Reading and research may be done only in the major field of study. *Prerequisite: Written permission of the adviser and program coordinator.*

Secondary Education

SEED 680. Reading & Research 1.00 - 3.00

Opportunities for directed reading and research in secondary English, foreign language, mathematics, science and/or social studies. *Prerequisite: EDUC 630 or equivalent and written permission of the adviser and program coordinator.*

Sport and Recreation Leadership

SRL 515. Leadership in Sport and Recreation Professions. 3.00

This course will introduce students to the concept of leadership, explore leadership theory, provide opportunities to develop leadership skills, relate leadership to ethics and values, and assist students in applying good leadership practice into their current and future roles and responsibilities in sport, recreation and campus recreation industries.

SRL 520. Philosophy in Sport and Recreation. 3.00

A critical review of literature concerning the nature and significance of sport and recreation from a philosophic perspective, including current modes of inquiry. Implications for sport and recreation in education are also discussed.

SRL 525. Research Techniques in Sport and Recreation Leadership. 3.00

Skill in the initiation, conduct and interpretation of research. Research methods in sport, recreation, and campus recreation are included as well as historical, philosophical and descriptive methods. Special emphasis is given to experimental, field and action research.

SRL 600. Administration in Sport and Recreation. 3.00

This course will address specific problems and new developments in the administration of sport and recreation programs and the fundamental concepts and principles of management. The course will focus on improving performance within sport and recreation organizations. Several areas will be discussed, including developing goals, decision making, strategic planning, operational planning, managing change, communication and supervision; various skill sets in these areas will be practiced.

SRL 605. Workshop in Sport and Recreation Leadership 1.00 - 3.00

An intensive study of one aspect of sport, recreation or campus recreation that is of current concern to administrators in the field.

SRL 610. Marketing and Promotions in Sport and Recreation. 3.00

This course provides the student with an examination and utilization of marketing principles in the areas of sport and recreation. Topics will include sport and recreation products and services, marketing strategies, consumer behavior, research and information management, promotions, positioning and sponsorship.

SRL 615. Fiscal Planning and Management in Sport and Recreation Leadership. 3.00

An overview of fiscal resources and financial administration of sport, recreation and campus recreation programs and facilities. The course will focus on the financial administration of public agencies, private organizations and commercial enterprises. Management areas relating to financial principles and policies, sources of revenue, types of expenditures, budget preparation, and preparation of grant proposals will be discussed.

SRL 620. Facilities and Event Management in Sport and Recreation. 3.00

The planning, construction, maintenance and utilization of sport, exercise and recreation facilities. The course will also include planning and managing events in the various types of venues within sport and recreation industries.

SRL 630. Facilities and Operations in Campus Recreation. 3.00

This course is designed to explore the problems, principles, and techniques of planning, design, and management of campus recreation facilities. Students will develop the conceptual connection between maintenance/custodial needs, revenue sources, program needs with the planning and design process; operational issues such as reservations, space prioritization, equipment and facility maintenance issues, and revenue generation will also be discussed.

SRL 635. Human Resources Management and Development in Sport and Recreation Leadership. 3.00

An overview of human resource management and human resource development in sport, recreation and campus recreation programs. The course will provide an introduction to administrative practices, organizational development and management theory, and apply these concepts into the day to day practices and skills required of an administrator of a sport, recreation and/or campus recreation program.

SRL 640. Group and Team Development: Theory, Research and Facilitation in Campus Recreation. 3.00

An introduction to theory, research and the practical considerations of group and team development. Skill development in leading groups and teams, facilitation and processing.

SRL 646. The American College Student. 3.00

An examination of developmental theory and review of the literature and research related to the American college student.

SRL 660. Programming in Campus Recreation. 3.00

An in-depth analysis of programming in a campus recreation center. Skill development in outcome-based program development and assessment; use of wellness models, health behavior theory, and student development theory in planning; and marketing and programming for diverse populations and skill levels.

SRL 670. Advanced Event Planning and Management in Sport and Recreation. 3.00

This course is designed to provide graduate students with an in-depth understanding and experiences related to event planning and management. The course will build off of the content delivered in SRL 620. Students will have the opportunity to plan and implement multiple events through the course of the semester. The researching, planning, coordinating, marketing, sponsorship, management and evaluation of special events will be the focus of this course.

SRL 675. Legal Concepts in Sport and Recreation Leadership. 3.00

A study of legal issues related to the administration of sport, recreation and campus recreation facilities, programs and services. An in-depth analysis of the legal foundations and responsibilities of sport and recreation agencies including tort and constitutional law, liability and risk management, contractual law, human resource management and the legislative and judicial processes.

SRL 680. Reading and Research in Sport and Recreation Leadership. 3.00

Directed reading in designated areas and specialized interests. Investigating, researching and reporting. Course may not be repeated. *Prerequisite: Permission of the instructor.*

SRL 685. Internship in Sport and Recreation Leadership. 3.00

Practical experience in applying administrative theory to problems encountered in a professional setting in sport, recreation or campus recreation industries. Specific assignments will

be determined by the needs of the student. *Prerequisite: Permission of the instructor.*

SRL 690. Practicum in Sport and Recreation Leadership 1.00

The practicum is a 1-credit course designed to allow students in the sport and recreation leadership program to gain practical experience in a chosen segment of the industry. *Prerequisite: Permission of the instructor.*

SRL 698. Comprehensive Continuance 1.00

Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed. *Prerequisite: Permission of the instructor.*

SRL 699. Thesis Continuance. 2.00.

Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed. *Prerequisite: Permission of the instructor.*

SRL 700. Thesis Research. 3.00

This course is graded on a satisfactory/unsatisfactory (S/U) basis. *Prerequisite: SRL 525 or equivalent, and permission of the instructor.*

Teaching English as a Second Language

TESL 502. Foundations of Language and Culture. 3.00

This course provides students with an understanding of the interrelationship between language and culture to enable them to gain skills to create appropriate learning environments for English learners. Course content includes concepts and issues pertaining to applied linguistics and theories/models of cultural competence and multicultural education.

TESL 525. Cross Cultural Education. 3.00

The course provides students with knowledge of the effects of socio-cultural variables in an instructional setting.

TESL 526. Concepts of First and Second Language Acquisition. 3.00

This course addresses theory and research of success and failure in first, second and subsequent language acquisition, classroom language learning and teaching, major methodologies, theories of bilingualism, interlanguage theory, the Monitor Model, acculturation/pidginization theory, cognitive/connectionist theory, and Universal Grammar.

TESL 528. Assessment and Curriculum Development in English as a Second Language. 3.00

The course provides students with a variety of assessment practices for profiling non-native students' abilities and for developing appropriate curriculum.

TESL 550. Practicum in TESOL Instructional Strategies. 3.00

This experience provides practice in the integrated teaching of content and language related to the concurrent TESL 680 course. Pre-service teachers will gain experience observing and instructing English language learners in elementary and middle/secondary classrooms dividing their 90-hour practicum between both groups. The seminar sessions provide opportunities to explore issues related to the practices, methods, and issues of teaching English language learners.

TESL 551. Practicum in TESOL 1st/2nd Language Acquisition 1.00

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 626, First and Second Language Acquisition.

TESL 552. Practicum in TESOL Literacy Development 1.00

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 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 635 course.

TESL 553. Practicum in Literacy Development 1.00

This practicum has pre-service teachers work directly with students in grades PreK-12 (as determined by the LED 566 instructor) on literacy development under the supervision of a mentor teacher and a university supervisor to plan and implement literacy strategies in language arts and content instruction that are directly related to topics covered in the LED 566 course. Most pre-service teachers will assist PreK-5 students.

TESL 570. Instructional Strategies for Teaching English as A Second Language. 3.00

This course is designed to provide preservice ESL teachers with experiences in designing and implementing instructional strategies to meet the linguistic needs of English Language Learners and utilizing assessment instruments to evaluate student progress. For ESL minors who are enrolled in a teacher licensure program. *Prerequisite: All required TESL courses.*

TESL 615. Integrated Language and Content Instruction. 3.00

The Sheltered Instruction Observation Protocol (SIOP) Model used in planning and implementing instruction for English language learners (ELLs) is studied. Theory and research behind the model is presented and application of the model in varied educational settings occurs, cultivating professional relationships and partnerships for the acquisition of academic English, advocacy for ELLs and instructional leadership in educational settings.

TESL 626. Concepts of First and Second Language Acquisition. 3.00

This course addresses theory and research of success and failure in first, second and subsequent language acquisition, classroom language learning and teaching, major methodologies, theories of bilingualism, interlanguage theory, the Monitor Model, acculturation/pidginization theory, cognitive/connectionist theory, and Universal Grammar.

TESL 628. Assessment and Curriculum Development in English as a Second Language. 3.00

The course provides students with a variety of assessment practices for profiling non-native students' abilities and for developing appropriate curriculum.

TESL 630. Development, Assessment and Instruction of Literacy, K-12. 3.00

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. *Prerequisite: CSD 300.*

TESL 680. Instructional Strategies for TESOL. 3.00

This course is designed to provide pre-service ESL teachers with experiences in designing and implementing instructional strategies to meet the linguistic needs of English Language Learners and utilizing assessment instruments to evaluate student progress.

TESL 681. Student Teaching (2-8 week blocks at PreK-12 levels). 6.00

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: ECED 512, EDUC 540 and TESOL courses.*

TESL 682. Professional Development, Partnership and Advocacy 1.00 - 3.00

Introduction of professional development offered by associations, professional organizations and higher education. Strategies for building partnerships with colleagues, families and communities are practiced. Advocacy for students' linguistic, academic, and personal development is addressed. Students discuss public issues affecting the education of majority and minority students and develop the skills to support students and their families socially and politically.

TESL 683. Research and Reading in TESOL 1.00-3.00

Designed for students who have completed TESL 695. Applied Research or others who desire to complete a research project pertaining to TESOL or a with a diversity-related focus. In this course, students conduct their research, write up their findings and present their conclusions in a written product.

TESL 690. Special Topics in TESOL 1.00

The course is designed to allow the student to complete an independent study in a TESOL-related area under faculty supervision. *Prerequisite: Permission of the instructor.*

TESL 695. Applied Research. 3.00

This course provides an overview of action research and qualitative research for educational settings. Students will identify a key research focus and develop an appropriate research project that is grounded in the principles of the course.

TESL 700. Thesis 1.00-3.00

Designed for students who have completed TESL 695. Applied Research. In this course, students conduct their master's degree research, analyze their findings and present their conclusions in a written product. This course is graded on a satisfactory/unsatisfactory (S/U) basis. *Prerequisite: TESL 695.*

Writing, Rhetoric and Technical Communication

WRTC 500. Critical Questions in Writing, Rhetoric and Technical Communication. 3.00

A foundations course introducing students to the critical questions and ideas emerging from the intersections of writing, rhetoric, and technical communication. Through reading, discussion, research and application of theory to the production of deliverables, students in the course acquire a solid foundation in this program of study and begin to develop a professional identity.

WRTC 504. Professional Editing in Writing, Rhetoric and Technical Communication. 3.00

Advanced study and practice in the duties essential to managing documents through the editorial process. Includes collaborating with authors as well as establishing awareness of audience, purpose, scope and context for print and online documents. Includes training in numerous levels of editing, such as proofreading, copyediting, substantive editing, sensitivity editing, editing design and graphics, and editing for intercultural audiences.

WRTC 508. Research Methods in Writing, Rhetoric and Technical Communication. 3.00

Advanced study of research methodologies used in writing, rhetoric and technical communication. Includes techniques used for collecting, sorting, analyzing and presenting information and data both quantitatively and qualitatively from primary and secondary sources. Requires in-depth research through a self-designed study grounded in a clearly articulated awareness of audience, purpose and context. *Prerequisite: WRTC 500 and WRTC 504*

WRTC 550. Organizational Communication. 3.00

Advanced study of the structure of communication in organizations by exploring formal and informal communication systems in government, industry and business. Examines the role of communication in The social construction of organizations with hierarchical and nontraditional structures. *Prerequisite: WRTC 508 or permission of instructor.*

WRTC 595. Special Topics in Writing, Rhetoric and Technical Communication. 3.00

Writing and research in a variety of writing, rhetoric and technical communication genres. Examines special and timely issues currently being explored in the field not addressed in sufficient depth in regularly scheduled WRTC courses. May be repeated with different course content and permission of director.

WRTC 604. Ethics in Communication. 3.00

Examines the relationship between rhetoric and ethics, emphasizing the challenges emerging from historical and contemporary communication. Employs various theories to explore the complex interplay among agency, authorship and intellectual property. Topics may include free speech, falsification of data, surveillance, ownership of information and conflicts of interest.

WRTC 608. Intercultural Literacies. 3.00

Examines critical approaches to intercultural communication beyond ethnic and racial lines. Investigates key theories of identity and difference, and intercultural communication practices. Topics may include definitions of culture, cross-cultural communication challenges and issues of globalization, localization and translation.

WRTC 610. Publication Management. 3.00

Advanced study of the management and editorial policy of academic and professional publications. Examines such managerial and editorial responsibilities as defining editorial policy, choosing a management hierarchy, defining management roles, reviewing and editing submissions for publication, and collaborating with authors. *Prerequisite: WRTC 504 and WRTC 508, or permission of instructor.*

WRTC 612. Teaching Writing. 3.00

Preparation of WRTC teaching assistants in rhetorical theory and teaching methodologies. Emphasizes pedagogical strategies central to teaching effective written and oral communication in the field and provides practice in course development and assessment under the guidance of a faculty mentor in actual course situations. Required of all teaching assistants before their first semester teaching.

WRTC 624. Public Work of Rhetoric. 3.00

Explores the intersections among individuals, organizations, communities, environments and texts that inform the public work of rhetoric. Employs rhetorical theories to examine the way these networks produce and make discourses visible. Topics may include the role of technology, advocacy, contemporary and historical social movements, and non-profit and governmental organizations.

WRTC 628. Genre in Action. 3.00

Explores how established genres circulate and mutate within ecologies of humans, objects, technologies and spaces. Students will explore theories related to genre in order to analyze and compose within a medical, scientific, nonprofit, academic or corporate discourse community of their choice.

WRTC 630. Legal Writing. 3.00

Advanced study of central components of legal writing such as legal analysis, representation of facts and evidence, reasoning, logic and argumentation. Addresses such key rhetorical elements of legal documents as clarity and conciseness of style, level of diction, jargon, passive voice and errors in person. *Prerequisite: WRTC 504 and WRTC 508, or permission of instructor.*

WRTC 632. Issues in Rhetorical Theory. 3.00

A course focused on the advanced study of rhetoric, including the exploration, analysis and application of diverse rhetorical theories. Requires students to synthesize texts, and enter into conversations on specific streams of rhetorical knowledge or that enhance professional communication. This course addresses a range of rhetorical issues arranged by era, movement or object of study. May be repeated with different content.

WRTC 640. Proposal & Grant Writing. 3.00

Advanced study of the planning and writing of proposals and grants with emphasis on research proposals and grants seeking funding from industry and government. Covers key proposal components including the executive summary, purpose and scope, problem definition, need, methodology, project feasibility, facility requirements, personnel qualifications, cost and proposal presentation.

WRTC 644. Discourses of Health and Medicine. 3.00

Introduces theory and research in medical rhetoric, health communication and related areas. Students will employ a variety of scholarly lenses, including technical communication, rhetoric, science studies and sociology, to examine the intersections between health and medicine. Topics may include patients' agency and advocacy, patient compliance, uses of writing in clinical settings and digital spaces, access to health resources, politics of healthcare and the role of narrative.

WRTC 648. Rhetoric of Science Technology. 3.00

Introduces students to theories exploring the discourses of science and technology. Provides students with a rhetorical perspective on the construction and application of scientific and technological knowledge. Topics may include the roles of language and ideology in scientific controversies, predominant theories in STEM fields and the scientific study of rhetoric.

WRTC 652. Communicating Science. 3.00

Prepares students to analyze, evaluate and produce scientific information for non-specialist audiences. Students will explore how writers, editors and designers reach and influence an audience, and how, in turn, the audience responds to their scientific texts. Topics may include the role of the news media, scientific literacy, advocacy and science policy creation.

WRTC 655. Electronic Graphic Design. 3.00

Advanced study of the theoretical and practical use of computer graphics as a form of visual communication in scientific or technical documents. Examines topics such as visual perception, design theory, formatted text and graphics, color and design concepts, animation, and video. Emphasizes the development of technical skills in manipulating electronically generated text and graphics.

WRTC 664. Critical Perspectives On Digital Cultures. 3.00

Introduces theories and methods that inform digital knowledge-making practices in social, civic, and professional contexts. Equips students with the analytical and technical skills to engage with established and emerging technologies. Topics may include network theory, remix culture, questions of identity, social media, code studies and mobile computing.

WRTC 668. Interfaces and Design. 3.00

Explores theoretical and practical approaches to the design of digital texts and objects. Students will learn and apply key design concepts and methodologies related to a variety of interfaces. Topics may include accessibility, usability, design theory, interface and content design, collaborative and open-source production spaces, and data management.

WRTC 680. Readings in Technical and Scientific Communication. 3.00

Faculty-supervised reading, research and writing on advanced technical and scientific communication projects not covered in regularly scheduled courses.

WRTC 699. Thesis/Internship Continuance. 2.00.

Continued study, research and writing for the thesis/internship. May be repeated as needed.

WRTC 700. Thesis. 3.00 - 6.00

Individual reading, research and writing associated with completion of major's thesis. Supervised by the director of the student's thesis committee. Student must complete six hours of thesis research to graduate. *Prerequisite: WRTC 500, WRTC 504, WRTC 508 and permission of thesis committee director. Credit hours may be taken over one or two semesters. This course is graded on a satisfactory/unsatisfactory (S/U) basis.*

WRTC 701. Internship. 3.00 - 6.00

Experiential learning that integrates knowledge and theory in writing, rhetoric and technical communication with practical application and skills development in a professional setting. Students will observe, analyze and reflect upon communication processes and apply effective written, interpersonal and public communication skills. Supervised by the student's internship committee in conjunction with a client, students develop and complete a significant, large-scale professional project. *Prerequisite: WRTC 500, WRTC 504, WRTC 508, and permission of internship committee director. Credit hours may be taken over one or two semesters. This course is graded on a satisfactory/unsatisfactory (S/U) basis.*

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