The Graduate School
James Madison University

2014-2015
Graduate Catalog

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- Public Management

Public Administration – Fifth Year Format (M.P.A.)
- Individualized
- International Stabilization and Recovery Operations
- Management in International Non-governmental Organizations
- Nonprofit Management
- Public Management

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- Visual Impairments

Special Education – Fifth Year Format (M.A.T.)
- K-12
- Early Childhood
- Inclusive Early Childhood Education

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- Painting and Drawing
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- Sculpture

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University Calendar

Fall Semester 2014

August 25, Monday
Classes meet as scheduled.

September 8, Monday
Thesis/Dissertation Committee Approval form due to The Graduate School.

September 11, Thursday
Graduate Council meeting.

September 12, Friday
Last day to withdraw from the university with cancellation of tuition charges and refund.

September 19, Friday
Graduate Student Dinner, Festival Grand Ballroom.

September 23, Tuesday
JMU Graduate and Professional School Fair.

September 26, Friday
Last day to submit an application for a master's, Ed.S. or doctoral degree if graduation requirements are to be met in December 2014.

October 10-12, Friday-Sunday
Family Weekend

October 9, Thursday
Graduate Council meeting.

October 10, Friday
First Block courses end.

October 13, Monday
Second Block courses begin.

October 21, Tuesday
First Block course grades due in the Office of the Registrar.

October 27, Monday
Registration begins for 2015 spring semester.

October 29, Wednesday
Last day for doctoral students to submit their dissertation titles to The Graduate School for inclusion in the December commencement program.

October 31-November 1, Friday-Saturday
Homecoming.

November 13, Thursday
Graduate Council meeting.

November 21, Friday
Dining Services closes at 7:30 p.m.

Comprehensive assessment results and Thesis/Research Project/Dissertation due to The Graduate School.

November 22, Saturday
Thanksgiving vacation begins.

November 29, Saturday
Dining Services opens at 4:30 p.m.

December 1, Monday
Classes resume.

Last day for students to submit work to faculty for 2014 spring semester and 2014 summer session for removal of "incomplete" grades.

December 5, Friday
Last day of classes.

Last day for faculty to turn in removal of "incomplete" grades for 2014 spring semester and 2014 summer session to the Office of the Registrar.

December 8-12, Monday-Friday
Final examinations.

December 13, Friday
Residence halls close. Dining Services close and fall meal plans end at 2 p.m.

Deadline for completion of course work for December graduates.

December 14, Saturday
Commencement begins at 10 a.m. in the Convocation Center.

Spring Semester 2015

January 11, Sunday
Spring meal plans begin and Dining Services open at 5 p.m.

January 12, Monday
Classes meet as scheduled.

January 15, Thursday
Graduate Council meeting.

January 16, Friday
Last day to submit an application for a master's, Ed.S. or doctoral degree if graduation requirements are to be met in May 2015.

January 19, Monday
Martin Luther King, Jr. Holiday. Classes do not meet.

January 29, Thursday
Thesis/Dissertation Committee Approval form due to The Graduate School.

January 30, Friday
Last day to withdraw from the university with cancellation of tuition charges and refund.

February 10, 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.

February 12, Thursday
Graduate Council meeting.

March 3, Tuesday
Third Block courses end.

March 6, Friday
Mid-semester grades due in the Office of the Registrar.
Dining Services closes at 2 p.m.

March 9-13, Monday-Friday
Spring Break. Classes do not meet.

March 15, Sunday
Dining Services open at 5 p.m.

March 16, Monday
Classes resume. Fourth Block courses begin.

March 20, Friday
James Madison Day.

March 23, Monday
Advance registration for 2015 summer session begins.

March 27, Friday
Last day for doctoral students to submit their dissertation titles to TGS for inclusion in the May commencement program.

April 7, Tuesday
Registration begins for 2015 fall semester.

April 9, Thursday
Graduate Council meeting.

April 17, Friday
Last day for students to submit work to faculty for 2014 fall semester for removal of "incomplete" grades.

April 22, Wednesday
Comprehensive assessment results and Thesis/Research Project/Dissertation due to The Graduate School.

April 30, Thursday
Last day of classes.
Last day for faculty to turn in removal of "incomplete" grades for 2014 fall semester to the Office of the Registrar.

May 1-7, Friday-Thursday
Final examinations.

May 7, Thursday
Dining Services close at 7 p.m. and spring meal plans end.
Deadline for completion of course work for May graduates.

May 8, Friday

Graduate Commencement Ceremony, 10 am, Convocation Center.

University Ceremony at 3:00pm.

May 15, Friday

Graduate Council retreat.

Graduate 2015 Summer Sessions

May 18 Monday

Registration and fee payment for twelve-week term, first four-week term and first six-week term.

Classes meet as scheduled.

May 25, Monday

Holiday – Memorial Day. Classes do not meet.

May 29, Friday

Last day to submit an application for a master's, Ed.S. or doctoral degree if graduation requirements are to be met in summer 2015.

June 11, Friday

Final examinations for first four-week term.

June 15, Monday

Registration and fee payment for eight-week term and second four-week term. Classes meet as scheduled.

June 26, Friday

Final examinations for first six-week term.

June 29, Monday

Registration and fee payment for second six-week term.

Classes meet as scheduled.

July 4, Saturday

Holiday – Fourth of July. Classes do not meet.

July 10, Friday

Comprehensive assessment results and Thesis/Research Project/Dissertation due to The Graduate School.
Final examinations for second four-week term.

August 7, Friday

Final examinations for twelve-week term, eight-week term and second six-week term.
Deadline for completion of course work for summer graduates.

About the University

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

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

The Madison Collaborative does not promote any particular version of right or wrong. Instead, beginning with freshman orientation and then continuing in campus programming, the General Education curriculum and courses in the 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 2012 enrollment of 19,927 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.

Mr. Jonathan R. Alger became JMU's sixth president in July 2012. Before coming to JMU, Mr. Alger served as the Senior Vice President and General Counsel at Rutgers University. In his first year in office, Mr. Alger embarked on an extensive Listening Tour with constituencies on and off campus to discuss the university's future as an institution fully engaged with ideas and the world. He also appointed the Madison Future Commission to help craft a comprehensive strategic plan for the next chapter of the university's history.

Colleges and Academic Administrative Units

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
- College of Visual and Performing Arts
- Libraries and Educational Technologies
- The Graduate School
- University Studies

Degrees

JMU provides the following undergraduate and graduate degrees:

Undergraduate Degrees

- Bachelor of Arts
- Bachelor of Business Administration
- Bachelor of Fine Arts
- Bachelor of Individualized Studies
- Bachelor of Music
- Bachelor of Science
- Bachelor of Science in Nursing
- Bachelor of Social Work

Graduate Degrees

- Doctor of Audiology
- Doctor of Musical Arts
- Doctor of Nursing Practice
- Doctor of Philosophy
- Doctor of Psychology
- Educational Specialist
- Master of Arts
- Master of Arts in Teaching
- Master of Business Administration
- Master of Education
- Master of Fine Arts
- Master of Music
- Master of Occupational Therapy
- Master of Public Administration
- Master of Physician Assistant Studies
- Master of Science
- Master of Science in Education
- Master of Science in Nursing

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 senior vice president for student affairs and university planning, the vice president for access and enrollment management, the vice president for university advancement, the executive director for campus and community programs, university counsel, and the executive assistant 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.

JMU Board of Visitors

Michael M. Thomas (Rector)

Carly Fiorina (Vice Rector)

Michael B. Battle

William T. Bolling

Warren K. Coleman

Pablo Cuevas

Barry E. DuVal

Vanessa M. Evans

Joseph K. Funkhouser, II

Leslie F. Gilliam

Lucy Hutchinson

Ronald J. Rainey

David A. Rexrode

Edward Rice

Fred D. Thompson, Jr.

David M. Scala (student member)

Donna L. Harper (Secretary)

Chief Administrative Officers

President

Jonathan R. Alger, J.D.

Senior Leadership Team

A. Jerry Benson, Ph.D.
Provost and Senior Vice President for Academic Affairs

Art T. Dean, II, M.Ed.
Executive Director for Campus and Community Programs

Maggie Burkhart Evans, M.A.
Executive Assistant to the President

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

Mark J. Warner, Ed.D.
Senior Vice President for Student Affairs and University Planning

Susan L. Wheeler, J.D.
Assistant Attorney General and Special Counsel/University Counsel

Deans

Ralph A. Alberico, M.L.S.
Dean of Libraries and Educational Technologies

Melissa W. Alemán, Ph.D.
Interim Dean, The Graduate School

David F. Brakke, Ph.D.
Dean, College of Science and Mathematics

Mary A. Gowan, Ph.D.
Dean, College of Business

David K. Jeffrey, Ph.D.
Dean, College of Arts and Letters

Robert A. Kolvoord, Ph.D.
Dean, College of Integrated Science and Engineering

Sharon E. Lovell, Ph.D.
Dean, College of Health and Behavioral Studies

George E. Sparks, Ph.D.
Dean, College of Visual and Performing Arts

Phillip M. Wishon, Ph.D.
Dean, College of Education

About The Graduate School

Grace Street House
17 West Grace Street
Harrisonburg, VA 22807

(540) 568-6131
www.jmu.edu/grad

Interim Dean

Dr. Melissa Alemán

The Graduate School coordinates graduate and post-graduate education throughout the university. The JMU Graduate School was established in 1954 when the State Board of Education authorized the university to offer programs leading to the Master of Science in Education degree. There have been over 16,000 graduate degrees awarded through 2013-2014, and enrollment growth and ongoing development of graduate programs of distinction are key strategic initiatives of the university.

It is the mission of The Graduate School to support, facilitate and promote excellence in lifelong education through graduate programs of distinction, innovative outreach programs and a diverse student body.

The Graduate School is authorized to offer graduate programs leading to master's, Educational Specialist, Doctor of Audiology, Doctor of Philosophy, Doctor of Psychology, Doctor of Musical Arts and Doctor of Nursing Practice degrees. Many graduate programs also offer concentration areas.

JMU Alumni

Office of Alumni Relations
(540) 568-6234
www.jmu.edu/alumni

JMU benefits from an active, enthusiastic and supportive alumni association. With more than 110,000 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, parents of current students and friends of the university. The association provides scholarship opportunities for incoming JMU freshmen as well as currently enrolled students. Alumni chapters across the country sponsor events, programs, services and various forms of communication for a diverse constituency. The alumni association also hosts annual programming on campus, including homecoming, reunions, senior week 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 quarterly 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. Further information about all of these programs, products and services is available at www.jmu.edu/alumni.

JMU Foundation

www.jmu.edu/foundation/

The James Madison University Foundation, Inc., a 501(c) 3 organization was established in 1969 to promote the welfare, efficiency, service to the public, and objectives of James Madison University and to encourage private gifts of money, securities, land, or other property of whatever character for such purposes, and to that end to take, hold, receive, and enjoy any gift, grant, devise or bequest, for the benefit of James Madison University in the manner designated, for the general purposes and improvement of James Madison University, and to accept, execute and administer any trust in which it may have an interest under the terms of the instrument creating the trust. Gifts received by the foundation are used to support the university in many ways, such as: construction of buildings, endowed chairs for distinguished faculty members, purchase of library resources, purchase of specialized equipment for university classrooms and laboratories, renovation and additions to existing facilities, scholarships for students, special academic opportunities for students and special academic programs.

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
Accreditation Commission for Programs in Hospitality Administration
AACSB International – The Association to Advance Collegiate Schools of Business
American Chemical Society
Accreditation Council for Occupational Therapy Education
American Psychological Association
Association for Advancement of Health Education
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 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
National Council for Accreditation of Teacher Education
Review Commission on Education for the Physician Assistant
Society for Public Health Education
Virginia Board of Nursing
Virginia State Board of Education

Membership

American Association of Colleges for Teacher Education
American Association of State Colleges and Universities
American Council on Education
Association of American Colleges and Universities
Association of Virginia Colleges and Universities
College and University Personnel Association
Council of Graduate Schools in the United States
Council of Southern Graduate Schools
National Association of College and University Business Officers
National Association of Student Personnel Administrators
Southeastern Universities Research Association
Institutional and Educational Membership
Association of Computing Machinery

Corporate Membership

American Association of University Women

Admission to Graduate Programs

Mailing Address
The Graduate School
James Madison University
MSC 6702
Harrisonburg, VA 22807

Physical Address
17 West Grace Street
Harrisonburg, VA 22807

Contact Information
E-mail: grad@jmu.edu
Phone: 540-568-6131
Fax: 540-568-7860

Admission Requirements

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.
- Satisfactory grade point average.
- Satisfactory test scores from a recognized standardized test, such as the Graduate Record Examination (GRE), Graduate Management Admission Test (GMAT) or Miller Analogy Test (MAT). Refer to specific academic programs for details (www.jmu.edu/grad/programs/index.shtml).

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 applications, unofficial transcripts for each institution listed and supplemental materials online. Applications that are not completed within 90 days of initial receipt will not be processed.

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.

General Application Procedures

Prospective students must submit their applications online through The Graduate School website. For details, refer to www.jmu.edu/grad/ prospective. As an applicant, a student will have access to JMU's MyMadison interactive applicant center which allows users to view their application status, read JMU news and announcements, and utilize tutorials and frequently asked questions for applicants. Upon successful submission of an application, the applicant will receive an electronic response confirming receipt of the online application, as well as instructions on activating the JMU eID as an applicant. Applicants can access the Applicant Center on MyMadison, JMU's student information system, to track the status of applications. Once the application has been reviewed by the program to which the prospective student applied, the program will submit a recommendation to The Graduate School. Applicants will be able to view their admission decision in the Applicant Center. 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 www.jmu.edu/finaid. Class schedules are available online at www.jmu.edu/registrar.

Submission of Materials for Application

The following information must be submitted online:

- Official graduate application
- $55 nonrefundable fee [1]
- 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. Do not have official transcripts sent to The Graduate School unless notified to do so by The Graduate School.
- Program specific requirements (if applicable)

[1] Paper applications require a $65 fee. Applications will not be processed without application fees. Application fees cannot be waived, except for McNair Scholars. Payment must be made online.

The following information must be sent to The Graduate School:

- The official standardized tests scores (GRE, GMAT, etc.) sent directly from the testing center. The JMU graduate institution code is 5392 (1043 for CSDCAS applicants).

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 those who are graduates of James Madison University, only transcripts for post-baccalaureate course work taken elsewhere need to be sent.

Application Deadlines

Refer to specific academic programs for details at www.jmu.edu/grad/programs/index.shtml.

International Student Applications

JMU encourages applications for graduate study from qualified international students. To assure that the university qualifies with the U.S. government as an educational institution serving international students, certain criteria must be met.

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

- Have the necessary ability and educational background to benefit from experiences in this institution.
- Demonstrate proficiency in English sufficient to carry a full program of graduate study through submission of a satisfactory score on the Test of English as a Foreign Language (TOEFL)or on the International English Language Testing System (IELTS). JMU's graduate institutional code is 5392.
- Examples of acceptable TOEFL scores include 570 on the paper-based version, 88 on the internet-based version, and 7.0 on the International English Language Testing System (IELTS).
- Have all funds necessary for expenses during the entire period of the student's stay without resorting to employment while in the United States, and complete the Financial Declaration form. The university has no financial assistance reserved exclusively for international students. International students are permitted to compete for assistantships with other graduate students.
- Submit a credential evaluation of the academic record to ensure that it is comparable to a U.S. baccalaureate degree. External evaluators are listed online at www.jmu.edu/grad/prospective/international/english_language_training.shtml and listed under Credential Evaluation Services.
- Complete an International Student Adviser's Report form 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.
- Enter the United States on a valid student or other visa.

International students requiring English language preparation should refer to www.jmu.edu/grad/prospective/international/english_language_training.shtml

Students who are conditionally admitted to JMU's graduate degree programs may fulfill their English language requirements by enrolling in EMU's Intensive English Program (IEP).

For further information regarding international student applications, contact:

International Graduate Admissions
James Madison University
The Graduate School, MSC 6702
17 West Grace Street
Harrisonburg, VA 22807

(540) 568-4041

www.jmu.edu/grad/prospective/international/index.shtml

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

Director, Office of International Student and Scholar Services
James Madison University
MSC 5731
Harrisonburg, VA 22807

www.jmu.edu/international/isss

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 the Applicant Center of MyMadison. 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 the Applicant Center through MyMadison 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 the Applicant Center through MyMadison 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 a 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 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 and any updated standardized test scores or transcripts to The Graduate School. 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.

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 Residency

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 registered with the Office of the Registrar. This can be done through MyMadison, online at www.jmu.edu/registrar.

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

www.jmu.edu/registrar/veterans

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

Outreach and Engagement

Phone: (540) 568-4253
Fax: (540) 568-4252
Email: outreach@jmu.edu
Website: 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 serve as a catalyst by utilizing JMU resources to create mutually beneficial partnerships, advance educational opportunities, and empower individuals and our extended communities.

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
www.jmu.edu/registrar

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 non-degree 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 www.jmu.edu/outreach/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 www.jmu.edu/outreach and clicking "Apply Online Now." Students should register online during the dates identified for non-degree seeking students following the instructions at 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 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 www.jmu.edu/outreach/programs/all/ceu/index.shtml. Information on non-credit course offerings and registration is available at www.jmu.edu/outreach. Additional information about Outreach & Engagement as well as other registration information can be accessed on the Outreach & Engagement website.

Tuition, Fees and Expenses

University Business Office

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

(540) 568-6505
www.jmu.edu/ubo

Tuition and fee charges for the 2014-2015 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 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.

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 or cash by mail to:
  University Business Office
  738 South Mason Street
  MSC 3516
  Harrisonburg, VA 22807

  Or 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 electronic account presentment M3 link in MyMadison or through the University Business Office website as a guest payer. 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 which use off-campus facilities have additional charges which will be determined at the time the course is offered.

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. Agencies charge the student a 33.33% fee that is the collection industry standard. 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 23-7.4 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 & Engagement (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 23-7.4 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 head of the office that made the determination (director of the Admissions office or assistant dean of The Graduate School). Appeal for a final administrative review of the decision to deny in-state tuition may be made to the university's Residency Appeals Committee chaired by the associate vice president for institutional

effectiveness. 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 Requirements." 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 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 Requirements" 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 except for PLUS loans, which are owned by the parent. Parent refunds will be in the form of a check and mailed to the parent who owns the loan. All student refunds are handled by the University's vendor – Higher One. A refund preference must be selected on the Higher One website. Review the refunding instructions on the UBO website or 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 fee payments.

Students who officially withdraw from the university after the deadline for the semester will be responsible for full tuition and 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 under "Tuition and Fees." 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.

Financial Assistance

Assistantships

The Graduate School
17 West Grace Street, MSC 6702

Phone: (540) 568-7065
www.jmu.edu/grad/currentstudents/assistantships.shtml

Scholarships, Grants, Student Employment and Loans

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

Phone: (540) 568-7820
www.jmu.edu/finaid

Assistantships

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.

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 limited to nine paid graduate hours of tuition each fall and spring semester, although contracts are usually written for an academic year. 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 hours.

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.

Classification of Assistantships

Doctoral Assistant

A Doctoral Assistant is assigned to an academic department to assist faculty members in their responsibilities of teaching and/or research. Students in doctoral programs may also serve as Teaching Assistants. Doctoral Assistants must be enrolled in a doctoral program at JMU. Doctoral Assistantships may cover more than the regular amount of tuition, may pay a higher stipend and may remain in effect through all or part of the summer term.

Graduate Assistant

A Graduate Assistant is assigned to an academic department, 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.

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 department 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. Teaching Assistants must have completed a minimum of 18 hours of appropriate graduate course work. A Teaching Assistant 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. Permission for such employment must come 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 overall effect of additional employment on the student's academic performance.

Application for Assistantships

Application Process

A student interested in a graduate assistantship should inform the graduate program to which he or she is applying of his or her interest in an assistantship. If there is not an assistantship available, the student may want to apply for a posted assistantship through another department.

To apply for an assistantship:

- Go to 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 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.

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.

Criteria

To be eligible for assistantship consideration, students must:

- Be conditionally or unconditionally accepted into a specific graduation 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 the period of the assistantship.

Deadlines

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

Tuition

For tuition to be covered by the assistantship, all Graduate Assistants must register each semester for all courses during the regular registration period(s) and prior to the tuition refund date as outlined in the Registration and Student Record Services Handbook. Students who register for any additional courses after this time will be held personally responsible for additional tuition and fees.

Students who drop courses after the add/drop deadline but before the end of the course adjustment deadline will be held responsible for fees and will receive a grade of "W" for the course. A grade of "WP" or "WF" (according to the status of the student at the time of withdrawal) will be assigned at the discretion of the instructor to the students who withdraw after the course adjustment deadline. The "WP" or "WF" will be recorded and remain on the student's transcript. Exceptions will be made only for documented extenuating circumstances and will be handled on a case-by-case basis.

Conditions of Continuation in Assistantship

Graduate Assistants are required to make satisfactory progress toward their degrees, which means they must:

- Carry nine hours of graduate course work each semester. Underload approval is required if a Graduate Assistant is not registered for nine graduate hours each semester. Underloads are not approved for less than six graduate credits. Only one underload may be granted during a Graduate Assistant's program of study.
- Maintain at least a 3.0 graduate GPA in order to retain or reapply for the assistantship.

Forfeiture of Assistantship

Students who leave the university, fail to perform the duties under their assistantships, lose their eligibility for the assistantship, or violate a university policy or state or federal law will 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.

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.

Students interested in information on financial assistance programs should visit the financial aid website, contact the Office of Financial Aid and Scholarships or send an e-mail to fin_aid@jmu.edu. Information about financial aid and scholarships at JMU can also be found through a variety of links at www.jmu.edu/finaid. 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 from www.jmu.edu/finaid/forms.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 Work-Study Program
- Need-based Foundation Scholarships
- Federal Grad PLUS Direct Loan

When a student files the FAFSA, the federal processor calculates his or 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.

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.

Equal Opportunity Employment

James Madison University is committed to selecting faculty and staff without discrimination against individuals 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.

Inquiries or requests for reasonable accommodation may be directed to the activity coordinator, the appropriate university office or the Office of Equal Opportunity.

1017 Harrison Street, MSC 5802
Harrisonburg, Virginia, 22807

Phone: (540) 568-6991

Fax: (540) 568-7992

TDD: (540) 568-2278

More information is available through the Office of Equal Opportunity website.

Satisfactory Academic Progress

To be academically 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 at www.jmu.edu/finaid/sap.shtml.

Student Loans

Website: www.jmu.edu/finaid

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/finaid. 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/finaid. 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

Website: www.jmu.edu/scholarships

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

Private Off-campus Scholarships

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

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

The student is responsible for compliance with 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 at www2.ed.gov/programs/triomcnair/index.html.

Student Employment

Website: www.jmu.edu/stuemploy

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.

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 next year's 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.

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.

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 "Forms" section at www.jmu.edu/finaid for a sample calculation.

General Regulations

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.

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). If required by the academic unit, academic work completed more than six years prior to the students' anticipated graduation date might be subject to review by the academic units and The Graduate School for applicability to the graduate degree program. Additional standards may apply in programs leading to licensure or certification.

Changes in Requirements

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

www.ed.gov/policy/gen/reg/ferpa/index.html

For more detailed information concerning JMU's records policy see James Madison University, see Policy 2112, The Family Educational Rights and Privacy Act.

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.

Exemption from the Continuous Enrollment Requirement

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

1. Leave of Absence: Continuous Enrollment is granted in individual cases when the student demonstrates sufficient cause (e.g., illness, or other personal circumstances). A request for this type of leave must be submitted by the student in writing (electronic mail is sufficient), indicating the reason(s). The student's request must be approved by the graduate program director of the student's program and the dean of The Graduate School. This leave is granted for a specified time period that may not exceed three semesters total, excluding summer session. In no case may on-leave status exceed this maximum throughout the student's entire degree program. When a student on leave plans to resume graduate study, he or 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.
2. Planned Leave of Absence: Granted to students for whom the unique design of their graduate program (not the manner in which they choose to complete their program) is such that the offering of courses is not on a continuous semester-to-semester basis. Planned Leave of Absence for students in a program is requested by the program faculty and must be approved by the dean of The Graduate School. Examples of programs suited for Planned Leave of Absence includes summer-only programs, programs using a distance learning format and "executive" programs. It is assumed that these programs will not require the continuous enrollment exemption for the entire length of the program. Thus, students whose graduate programs are pre-approved for Planned Leave of Absence must submit a Request for Planned Leave of Absence indicating each term for which leave is requested. It is also assumed that these students will complete all degree requirements within the time limits established in the graduate catalog.

Both leaves must be approved by the dean of The Graduate School.

A graduate student who takes an unapproved break in registration by failing to maintain continuous enrollment or by failing to obtain a Leave of Absence: Continuous Enrollment approval 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 and pay the application fee.

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 in their program, such as thesis or dissertation continuance, during the semester they are scheduled to graduate.
- While completing a dissertation or thesis. If a student's graduation must be delayed a semester while he or she is completing a dissertation or thesis, he or she should register for thesis or dissertation continuance. GRAD 597 is not an option since the student will continue to receive feedback from the adviser and committee members while the thesis or dissertation is being completed.
- When an "I" is received in a course during the anticipated graduation semester. If a student is scheduled to graduate but receives 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.

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

Course Completion Deadlines

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 www.jmu.edu/registrar or this catalog for exact dates.

Course Credits

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

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.

To be eligible to receive an assistantship, each student must be conditionally or unconditionally accepted into a graduate program at JMU. A student who is provisionally accepted will not be eligible for a graduate assistantship until he or she achieves unconditional acceptance into a graduate program. Note: Graduate programs have the right to impose additional criteria as they see fit. The following academic load guidelines apply to all categories of graduate assistants.

Graduate assistants must:

- Carry nine hours of graduate course work each semester. Note: Underload approval is required if a graduate assistant is not registered for nine graduate hours each semester. Underloads for fewer than six graduate credits are not approved. Only one underload may be granted during a graduate assistant's program of study.
- Maintain at least a 3.0 graduate GPA in order to retain or reapply for the assistantship.

Assistantships can be awarded for a maximum of four semesters (fall and spring) or two academic years, except for Doctoral Assistants, students in the Master of Fine Arts program or students seeking the Education Specialist degree.

For their courses to be covered by their assistantship, all Graduate Assistants must enroll each semester during the regular registration period(s) and prior to the tuition refund date as outlined online at www.jmu.edu/registrar. Students who register for any additional courses after this time period will be held responsible for additional tuition and fees. Students who drop courses after the tuition refund date will be responsible for 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 JMU Office of Student Withdrawal if all courses are dropped to withdraw from the university.

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. Students should refer to their academic program for specific requirements. Only six hours of 501 workshop courses may be applied to a graduate degree program.

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

- Consult the 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 the program.
- Schedule an appointment with The Graduate School to review the format of the 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 Carrier Library.

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 can 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

Grade 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. To activate the grade review process, the student must follow these steps:

1. 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. 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.
2. The student meets with the course instructor by Friday of the third full week of classes to attempt to resolve the concern.
    - If the student and the course instructor reach an agreement that the grade should be changed, the course instructor 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 signs the Grade Review form and records a written response on the reverse side of the form. The instructor 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.
3. 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.
4. The academic unit head or graduate director meets with the student and confers with the relevant course instructor.

5. 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.
6. If all involved parties agree that the grade should be changed, the course instructor 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. 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:

1. The student contacts the dean by Friday of the eighth full week of classes and requests that the dean review the overall process.
2. The dean of the relevant college reviews the process to be sure the student and the faculty member 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.
3. 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.
   - If it is agreed that the student's grade should be changed, the relevant course instructor 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."

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 for the dates 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.

Unsatisfactory 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 reached by the student's adviser, academic unit head, or graduate program coordinator and will be referred to The Graduate School for final action.

"C" grades or a GPA of below 3.0 will be placed on academic warning and will receive written notification. A student will be dismissed from the degree program if the student receives an "F" or "U" in any graduate course or a total of three "C" grades in his or her graduate program. 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 re-apply and be re-accepted in the usual manner.

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.

In some cases, graduate students may take undergraduate courses as part of their program of graduate study. The GPA includes undergraduate courses taken during graduate study. However, if an undergraduate course places a student's GPA below 3.0, it will not place the student on academic warning status or prevent the student from graduating.

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 a written graduate plan of study by the end of the student's first semester and submit it to The Graduate School. 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.
- Enrolled students are strongly encouraged to take advantage of all available avenues of learning, including accessing the JMU faculty, staff and other students, as well as the library, laboratories and other facilities that nurture the academic experience.

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.

Requirements for Graduation Semester Registration

GRAD 597 cannot be used during the graduation semester.

Attendance at Commencement

Students are expected to attend graduation exercises. Graduation for all spring graduate students is held the Friday morning of exam week. A student unable to be present for the graduation exercises must notify The Graduate School no later than 15 working days before commencement.

Students completing a dissertation must submit the dissertation title to The Graduate School by March 27 (spring) or October 29 (fall) for inclusion in the commencement program.

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.

1. Each academic unit head will appoint an advisory committee made up of faculty and students from the academic unit that will hear grievances of students. The advisory committee may take any of the following actions:
   - Examine materials submitted by the student and the party grieved against ("respondent").
   - Interview the student and the respondent.
   - Interview any witnesses requested by the student, the respondent or the committee.
   - Request additional materials from any person or entity relevant to the charges.
   - Make a recommendation on the grievance to the academic unit head.
2. The academic unit head may accept the recommendation of the committee, reject the recommendation or partially accept and partially reject the recommendation. The academic unit head will take any action he or she deems appropriate on the grievance.
3. If either the student or the respondent is dissatisfied with the action taken by the academic unit head, the action may be appealed to the dean. The decision of the dean is final.
4. If the academic unit head is the party against whom the grievance is filed, the dean will receive the report of the committee and stand in the place of the head of the academic unit for the purpose of making the decision on the grievance. If the dean is the party against whom the grievance is filed, the Provost and 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 www.schev.edu/students/studentcomplaint.asp.

Honor System

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

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

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

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.

Undergraduate and 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, 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 Taylor Hall 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 at www.jmu.edu/registrar/wm_library/non_returning_loa_notice.doc

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.

Graduate Students

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.

1. 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).
2. The Graduate Program Director approves the deferment and informs the Director of Graduate Admissions that the deferment has been approved.
3. 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.
4. 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.

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.

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. 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 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 at www.jmu.edu/grad/current/forms.shtml.

Students who take their last courses to fulfill their programs of study at institutions other than JMU cannot graduate during that semester. 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."

Nondegree-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.

University Resources

JMU Libraries

Carrier Library

Carrier Library Circulation: (540) 568-6150 www.lib.jmu.edu

Carrier Library Reference Desk: (540) 568-6267

Music Library

(540) 568-6041 www.lib.jmu.edu/music

Rose Library

(540) 568-2731 www.lib.jmu.edu/rose/moreabout.aspx

JMU Libraries, consisting of Carrier Library, the Music Library and Rose Library, support research, study and instruction in the use of information resources at JMU. JMU Libraries house almost 800,000 volumes, including books, periodicals, and audiovisual materials; subscribe to over 13,000 journals; and offer access to growing collections of online books, journals, and media. The library Web site is an online gateway to the services and collections of the JMU Libraries.

Through the website, users can search LEO, the library catalog, connect to approximately 400 electronic databases, and find subject guides highlighting the most important print and electronic sources in many subject areas. Services such as e-mail reference and Interlibrary Loan request forms are also available on the Web site. As an authorized U.S. Government Document Depository, the JMU Libraries provide access to thousands of selected online and print documents. JMU Libraries is a member of VIVA, the Virtual Library of Virginia, a statewide consortium that offers access to numerous online journals and databases.

Carrier Library and the Rose Library each provide more than 100 personal computers in their public areas. In addition, most of the online resources on the library Web site can be accessed from any computer on campus, and those with current JMU electronic IDs can configure their browsers to access library resources from any remote location.

One of the JMU Libraries' principal goals is to provide students with lifelong learning skills that will enable them to find, use and evaluate information in all formats. Students learn basic information literacy skills through "Madison Research Essentials Toolkit," a set of online self-instruction modules available on the library Web site. Information literacy skills in the major are addressed through instruction sessions offered in library classrooms. Reference librarians are available on a walk-up basis or by appointment to answer questions and assist students with research.

The liaison program links a librarian to each academic unit. Liaison librarians provide a variety of services, including library instruction for course-related activities, collection development and consultation with individual faculty members and students.

The Music Library serves the students and faculty members of the School of Music, as well as offering its specialized resources to the greater university community. The Rose Library houses the science, technology and health sciences collections and provides study space for individuals and small groups, reading rooms, and open study areas with casual seating. It also includes a 24-hour study area with a secure entrance, a computer lab and coffee bar.

Media Resources

(540) 568-6802 www.lib.jmu.edu/media

Media Resources in Carrier Library acquires commercial educational media in video, audio and computer software formats for instruction and study by faculty, staff and students. It also provides an online video collection for streaming to the JMU community. Faculty and staff can consult with media center staff to locate program items not available in the collections. The center can assist users with scheduling and recording satellite programming for academic needs. It also distributes selected campus-wide software such as Microsoft Office, SPSS, SAS, Mathematica and other applications in coordination with IT Computing Support. Media Resources technical staff coordinate the development, installation and maintenance of technology systems in classrooms and many special facilities on campus. Media Resources also offers portable equipment such as laptops, projectors, digital cameras, camcorders and audio recorders for loan, as well as audio/video editing workstations for student projects. Staff provide user support for all installed and portable equipment, as well as repair services for non-computer media technology used on campus.

Center for Instructional Technology

(540) 568-7061 //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.

Center for Assessment and Research Studies (CARS)

MSC 6806
Harrisonburg, VA 22807

(540) 568-6706

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. The vision of the center is to be internationally recognized as a standard of excellence for practice, programs and scholarship in assessment and measurement.

Originating in 1986, the Center for Assessment and Research Studies at James Madison University is one of the largest campus-based agencies devoted to outcome assessment in the United States. Ten faculty and three staff perform a variety of assessment activities in general education, the major and student affairs. In conjunction with JMU's Office of Information Technology, the Assessment Center operates a computer-based testing lab where a variety of computer-based tests are administered on an ongoing basis to students on the JMU campus and beyond. CARS also administers a Ph.D. program in assessment and measurement established in 1998 designed to meet the expanding accountability, quality assurance, and outcome assessment needs of education, government and industry.

Center for Faculty Innovation

www.jmu.edu/cfi/

The Center for Faculty Innovation (CFI) provides comprehensive professional development opportunities for JMU instructional faculty, including graduate teaching assistants, 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.

Mission

The Center for Faculty Innovation enhances academic culture through professional development experiences designed to encourage excellence in teaching, scholarship, service, and leadership for JMU faculty.

Vision

We aim to be a widely respected professional development center where faculty empower faculty using evidence-based, integrative practices.

Information Technology

www.jmu.edu/computing/af

Computing HelpDesk

Students have access to the Computing HelpDesk for answers to computing questions. Students may call the Computing HelpDesk at (540) 568-3555 or visit www.jmu.edu/computing/helpdesk.

Computing Policies

Polices 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 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 at www.jmu.edu/computing/.

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 website at www.jmu.edu/computing/.

Student Services

Academic Affairs Mission Statement

(540) 568-6616 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

(540) 568-6434 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 and University Planning Mission Statement

(540) 568-3685 www.jmu.edu/stuaffairs/

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

Business Services

Bookstore

211 Bluestone Drive, MSC 2902 www.jmu.edu/bookstore

(540) 568-6121

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, office and computer supplies, software, clothing, gifts, magazines and greeting cards. For students' convenience, the bookstore provides services including special orders for books, textbook buy back, gift certificates, film processing, bus tickets and computer services.

Card Services

Warren Hall, Third Floor, MSC 3532 www.jmu.edu/cardctr/

(540) 568-6446

Card Services issues the JMU access card, the official identification card for all members of the university community. JAC allows access to various campus facilities and services. It is also used for meal plans, dining dollar declining balance accounts and FLEX declining balance accounts, all of which are administered by Card Services. FLEX declining balance accounts are honored for purchases or services in the following areas: bookstore, on-campus copy centers and copy machines, game room, library fines, Mister Chips convenience store, postal services, University Health Center, UREC, printing labs across campus, Masterpiece Theatre, Parking Services, UPB movies, on-campus vending machines, Warren Hall Ticket Office and all dining services locations as well as many off campus locations.

Copy Centers

Medical Arts Suite 31, MSC 5722 HHS, Room 1002, MSC 4311 www.jmu.edu/copycenter
(540) 568-3263 (540) 568-8731

The University Copy Centers are owned and operated by the university as a service to the campus community. Two locations provide a full range of photocopying services. Academic coursepack service, copyright permission service, full color copying, digital copying and digital file storage, network printing, binding, laminating and express photocopying service are available. Hours of operation vary by location. All centers are closed for university holidays.

Dining Services

Gibbons Hall, Entrance 7, MSC 0901 www.jmu.edu/dining/

(540) 568-6751

To meet the varied needs of individual students, Dining Services provides different meal plans. All on-campus residents choose from among three meal plans, which come with the "Student Housing and Food Contract." They are the 19-Meal Plan, the 14-Meal Plan and Any-11-Premier Meal Plan. Commuters, who do not automatically have meal plans, may purchase any of the on-campus plans and have the additional options of a ten, five and three meal plan.

The department offers declining balance accounts that operate like debit cards. Students using this plan, called Dining Dollars, get a 5-percent discount and pay no sales tax on anything they buy. Cash sales are also welcome at all Dining Services locations.

Parking Services

Parking Deck, 381 Bluestone Drive, MSC 1301 www.jmu.edu/parking

(540) 568-3300

All vehicles parked on property owned, operated or leased by James Madison University are required to display a valid JMU parking permit. For information regarding the university's parking regulations refer to the Parking and Traffic Regulations Handbook. A copy of the handbook may be obtained free of charge upon request at the Parking Services office. Updated information can be obtained throughout the academic year on the website.

Career and Academic Planning

Student Success Center	Employer Relations and Recruiting	www.jmu.edu/cap
MSC 1016	Sonner Hall, Lower Level	
(540) 568-6555	(540) 568-7379	

Career and Academic Planning coordinates academic advising for all first year students and undeclared students; assists students in choosing or changing their major and deciding upon a career direction; and provides a variety of job search programs and graduate school application services.

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 plan to eventually launch an effective job search.

Academic and Career Resource Center

The resource center provides information and assistance related to choosing a major and career planning, internship/summer jobs, job search tools and career trend information. A tool available to all students is FOCUS, a web-based career exploration tool available in the resource center and on-line. Directories with employer contact information and graduate school options are also available. Resources include books, printed materials, handouts, databases, career software and Web-based information. Information is organized on a self-help basis so that students and faculty may browse at their leisure. Staff members are available to answer questions and help students use resource materials.

Employment, Internship and Job Search Services

Employer Relations and Recruiting Services

Business, industry, government and educational employers come to JMU throughout the year to conduct job interviews with graduating seniors and students seeking internships. Information about the interview program, participating employers and interview sign-ups is available on the Career and Academic Planning website. To interview, students must create a profile on Recruit-a-Duke, an online system that connects students with employment and interviewing opportunities. To help students prepare for interviews, mock interview sessions with employer participants are held each semester.

Resume Development

Assistance with writing resumes is available to students in many forms. Students may access resume writing support via the Career and Academic Planning website. Resume writing workshops and other related services are available throughout the year, and students may make an appointment with an academic and career advisor to receive individual assistance. Additionally, a variety of resume guides are available in the Resource.

Career Fairs

The office sponsors a number of career fair events each year to provide students with the opportunity to interact with employers and obtain employment-related information.

Job Search

Job search related programs are offered throughout the academic year, including presentations on job search strategies for targeted industries, behavioral interviewing, networking and evaluating job offers. Students may also meet individually with an academic and career advisor to tailor their job search. Job vacancy publications are available through the resource center, which provide information about job opportunities in a variety of career fields. Recruit-a-Duke, JMU's online job search system, also gives students access to vacancy listings.

Internships

Internships are available with the federal government, other governmental agencies, nonprofit organizations and private entities. Students interested in internships should contact Career and Academic Planning or the appropriate academic unit office to obtain additional information. Credit must be arranged in advance with the appropriate academic unit head and the Office of the Registrar.

Community Service-Learning

Student Success Center, 2nd Floor www.jmu.edu/csl

(540) 568-6366

Community Service-Learning programs allow students to learn and develop through active participation in thoughtfully organized community service. Students, faculty, staff and community agencies partner to help prepare students for lifelong community service and civic engagement. Alternative break programs are student led and developed service trips to locations in the United States and abroad. Most trips occur during spring break week, but trips may be offered during any academic break. Local weekend trips are also offered. Students eligible for the Federal Work Study financial aid program can come to CS-L to be placed in America Reads (tutoring in local elementary schools) and Community Based Federal Work Study (serving in a local community service agency).

Center for Multicultural Student Services

Warren Hall, Room 245, MSC 3504 www.jmu.edu/multicultural

(540) 568-6636

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 recruitment of multicultural students, faculty and staff.
- To assist with the retention of multicultural students through a host of program services designed to encourage 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 be an active part of the mainstream of campus life.

The office works diligently to provide the following services:

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

Counseling Center

Student Success Center, Room 3100, MSC 0801 www.jmu.edu/counselingctr/

(540) 568-6552

The CSDC provides free, confidential personal counseling services to all full-time JMU students. Appointments can be made in person or over the phone (568-6552). 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 under 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:
  - #tacklinganxiety: This treatment program provides proven strategies to effectively reduce anxiety, worry and panic symptoms.
  - You've Got This: This treatment program helps students to develop realistic perspectives and effective skills for coping with the stress of both daily college life and challenging personal situations.
  - 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 Assault Services: The Counseling Center provides crisis, individual and group counseling to students who are survivors of sexual assault. Advocacy and support 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 a psychiatrist who prescribes 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 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.
  - Certificate Programs: The Resiliency Workshops help students to develop the abilities and confidence necessary to effectively deal with a variety of social, emotional and academic situations.

JMU Learning Centers

Student Success Center Room 1138 (540) 568-2926 (fax)

(540) 568-2932 www.jmu.edu/learning

JMU Learning Centers supports students, faculty, and staff through the following programs and services:

Communication Center

Student Success Center, Room 1155 (540) 568-3450 (fax)

(540) 568-6349 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.

Services for digital communication include:

- One-on-one consultations for choosing the most effective online tools and planning a project
- Resources and tutorials on effective digital design, communication, navigation, and usability
- Usability testing for digital projects
- Collaborating with faculty to design effective digital assignments

Services for oral communication include:

- 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

English Language Learner Services

Student Success Center, Room 1155 (540) 568-3450 (fax)

(540) 568-2881 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, speaking
- American academic culture
- Multilingual writing groups

Science & Math Learning Center

Student Success Center, Room 1107 (540) 568-4818 (fax)

(540) 568-3379 www.jmu.edu/smlc

The Science & 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 free, 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.

University Writing Center

Student Success Center, Room 1121 (540) 568-3450 (fax)

(540) 568-1759 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:

- Individualized writing consultations
- Online writing resources for students and faculty
- Computer lab and study space
- Faculty consultations for designing assignments and responding to student writing
- In-class workshops on writing-related issues for any academic course or department

Satellite locations at

- Carrier Library, Main Lobby
- Rose Library, Main Lobby
- Athletic Performance Center

Office of Disability Services and Learning Strategies

Student Success Center, Suite 1202 (540) 568-7099 (fax)

(540) 568-6705 (Phone/TDD) www.jmu.edu/ods

The disability services and learning strategies office is comprised of the following areas:

Disability Services

Disability Services assists the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at JMU. Services include, but are not limited to the following:

- 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
- Peer Mentoring
- Assistive Technology and alternative text services

Accessible Media and Technology

Student Success Center, Suite 1202 (540) 568-5046

alt-media@jmu.edu www.jmu.edu/ods/accommodations/accessible-media

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

Services include:

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

Accessible Technology Computer Labs with specialized software and furniture are located in Carrier Library, Room 119 and in Rose Library, Room 1204.

Learning Strategies Instruction

Student Success Center, Suite 1202 (540) 568-7099 (fax)

(540) 568-6705 www.jmu.edu/ods/LSI.shtml

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
- Studying
- Test-taking
- Time management

Screening and Referral Service

Student Success Center, Suite 1202 (540) 568-2926 (fax)

(540) 568-7146 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 making process for recommending the next step in the process.

Office of the Dean of Students

Taylor Hall, Room 300, MSC 3534 www.jmu.edu/deanofstudents

(540) 568-6468

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

- notifying professors of extended class absences.
- facilitating the resolution of student issues and concerns.
- providing direction to students on procedures and regulations.
- providing confidential, impartial facilitation of communication.

Office of Equal Opportunity

1017 Harrison Street, MSC 5802 www.jmu.edu/oeo/

(540) 568-6991 (Voice/TDD)

The Office of Equal Opportunity promotes the practice of and adherence to the equal opportunity policies of James Madison University. Bringing diversity to JMU, the program assists in the identification and recruitment of qualified individuals who normally have been underrepresented in the university. It also sponsors workshops on various subjects such as sexual harassment, disabilities and affirmative action.

Title IX of the Education Amendments of 1972 and James Madison University policy protects people from discrimination based on sex in education programs or activities which receive federal financial assistance. Title IX states that 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.

The Office of Equal Opportunity also provides a place where individuals who feel that they have been subjected to harassment or discrimination due to age, color, disability, gender identity, genetic information, national origin, parental status, political affiliation, race, religion, sex, sexual orientation or veteran status can file a complaint for an impartial resolution. Inquiries may be directed to the Office of Equal Opportunity.

Office of the Registrar

Student Success Center, Room 5300, MSC 3528 www.jmu.edu/registrar/

(540) 568-6281

The Office of the Registrar is responsible for the following activities:

- Add and drop registration procedures
- Athletic certification
- Class schedule preparation
- Commencement activities
- Degree audits
- Diploma issuance
- Enrollment verifications
- Student records
- Transfer credit evaluation
- Transcript issuance

For information regarding veterans' affairs and graduation, students should contact the Office of the Registrar or call (540) 568-6281.

Office of Student Accountability and Restorative Practices

Frederikson Hall, Room C101, MSC 2901 www.jmu.edu/ osarp

(540) 568-6218

The Office of Student Accountability and Restorative Practices collaborates with partners to facilitate civic responsibility and student development in order to provide opportunities for the cultivation and restoration of the university community.

Public Safety

Anthony-Seeger Hall, MSC 6302 www.jmu.edu/pubsafety

(540) 568-6913

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

Huffman Hall, MSC 2401 www.jmu.edu/orl/

(540) 568-4663

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

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.

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

Student Government Association

Taylor Hall, Room 203, JMU Box 3523 http://sga.jmu.edu/

(540) 568-6376

Students, faculty and administration share the responsibility for governing JMU. They are represented on the University Council, on its commissions and on standing and special committees reporting to these bodies.

The Student Government Association collectively represents the university student population. SGA promotes the welfare of students by providing the medium through which students can actively voice their concerns, and by serving as a liaison between the students, faculty and administration at JMU.

Student Handbook

www.jmu.edu/judicial/handbook.shtml

The student handbook contains a wealth of information about university policies and regulations, university facilities and student organizations.

University Health Center

Student Success Center (540) 568-7803 (fax)

(540) 568-6178 www.jmu.edu/healthcenter/

The University Health Center consists of clinical services, Student Wellness and Outreach, and Substance Abuse Prevention. Our staff partners with students to empower them to make informed choices by providing a holistic approach to student health, education, wellness and outreach services in a confidential, inclusive and respectful environment. The center is staffed by qualified healthcare professionals who administer care in a confidential and professional manner.

The University Health Center houses:

Medical Clinic

Montpelier Hall, 4th floor (540) 568-6178

The University Health Center partners with students to empower them to make informed choices by providing a holistic approach to student health, education, wellness and outreach services in a confidential, inclusive and respectful environment. The University Health Center is staffed by a medical team of board certified providers, a registered dietitian, professional health educators and substance abuse prevention specialists who administer care in a confidential and professional manner.

Students must enter their immunization dates into //jmu.edu/MyJMUHealth and have an Immunization Form completed and verified by a health care provider on file at the University Health Center. State law requires that all full-time students provide this documentation. See //jmu.edu/MyJMUHealth for additional information and to download the Immunization Form.

The Health Center offers free regular office visits for full-time students and low-cost specialty services. In addition, the Health Center offers:

- Allergy clinic
- Appointment medical clinic
- Health education and outreach
- International travel clinic
- Lab services
- LGBT & Ally Education Program
- Limited pharmacy dispensing
- Nutritional counseling
- Peer education
- Sexual assault education, advocacy, and support
- Specialty clinic
- Student health insurance
- Substance abuse prevention & recovery
- Walk-in medical clinic
- Women's health clinic

University Recreation

MSC 3901 www.jmu.edu/recreation/

(540) 568-8737

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, fitness, group fitness, informal recreation, intramural sports, nutrition, safety, sport clubs, wellness and youth programs.

The main UREC facility is located near the JMU Convocation Center on the east side of campus. It is a multi-level fitness and wellness center with over 140,000 square feet of activity space. Building highlights include a 33-foot climbing wall, seven racquetball courts, four basketball/volleyball courts, indoor track, cardio theatre, indoor pool/sauna/spa area, locker rooms, massage studio, outdoor courtyard with sand volleyball, outdoor turf fields and group fitness/ multipurpose studios. UREC also houses an equipment center where sports and camping/outdoor equipment can be checked out or rented. Personal training, fitness/nutrition analysis and massage services are also available for a fee.

UREC also encompasses several satellite facilities. University Park, accessed by Devon Lane, serves as the students' backyard, accommodating up to 4,000 participants when fully utilized. University Park includes opportunities for drop-in recreation, structured intramural sports and sport club programs, as well as a team and leadership development program. Facilities include an open event lawn, tennis, sand volleyball and basketball courts, sports turf, pavilion, and a jogging trail. East Campus Fields will also offer opportunities for informal recreation and formal sports programs.

Full-time graduate students have access to UREC and University Park with a valid JACard. Graduate students enrolled in less than six credit hours may use the facility and related programs by paying a prorated fee. Online registration is available for educational programs, group fitness classes and intramural sports. Programs requiring fees can be registered for in-person at the main UREC facility using FLEX.

University Unions

Taylor Hall, Room 205B, MSC 3501 www.jmu.edu/universityunions

(540) 568-3341

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:

The Dux Center

Taylor Hall, Room 102, MSC 3501 www.jmu.edu/dux

(540) 568-5901

The Dux Center serves as a leadership clearing house for the university. The premier leadership program sponsored by the Dux Center is Kijiji Citizens of Influence. This is a three-year program that meets once a week during the fall and spring semesters. Students become more familiar with who they are, what their passions are, and how they can be a citizen of influence. In addition to sponsoring this unique leadership program, the Dux Center also strives to provide information about other leadership programs offered by departments and areas across campus.

Madison Union Scheduling

Taylor Hall, Room 233, MSC 3501 (540) 568-6330

Festival Conference and Student Center Scheduling

(540) 568-1716 www.jmu.edu/events/

Event Management 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

Madison Union, MSC 3501 Festival Conference and Student Center, MSC 4201

(540) 568-5555 (540) 568-1715

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

Fraternity/Sorority Life

Taylor Hall, Room 205B, MSC 3501 (540) 568-6444 (fax)

(540) 568-3341 www.jmu.edu/fsl

The University Unions work with fraternities and sororities to foster cooperation and communication among the chapters, the university and the community. The staff advises the Inter-Fraternity and Panhellenic Councils and also works with the individual chapters in promoting leadership, involvement and service.

Office of Student Activities and Involvement

Taylor Hall, Room 205A, MSC 3501 (540) 568-6444 (fax)

(540) 568-8157 www.jmu.edu/osai/

The Office of Student Activities and Involvement houses Student Organizations, Student Government, Mad4U, Make Your Mark on Madison Leadership Program and the University Program Board. The Office of Student Activities and Involvement provides a wide range of educational, social and cultural events, as well as support services for all JMU student clubs and organizations. Student Organization Night at the beginning of each semester offers an opportunity for all students to meet members of clubs, learn about organizations and discover how to become involved with them.

Taylor Down Under

Taylor Hall, Room 102, MSC 3501 (540) 568-7853

Taylor Down Under, located on the ground floor of Taylor Hall, is comprised of a lounge, the Corner Pocket Game Room and a coffee bar. The TDU lounge area was developed with the commuter student in mind but has become a popular hangout for all students. This area offers computers for student use, television, evening entertainment on the TDU Stage, comfortable seating and an information desk.

University Program Board

Taylor Hall, Room 234, MSC 3505 http://upb.jmu.edu/

(540) 568-6217

Campus entertainment is scheduled through the University Program Board, a student organization advised through the University Unions. 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

Office of the Dean of Students (540) 568-6468

Taylor Hall, Room 300, MSC 3534

The Office of the Dean of Students assists students who are considering withdrawing from the university. The student and staff member discuss personal, financial and academic implications of withdrawal. The staff member will provide and assist the student with the proper withdrawal application form.

Your Right to Know

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.

College of Arts and Letters

Harrison Hall, Suite 1103, MSC 2105
(540) 568-6472

www.jmu.edu/cal/

Dean
Dr. David K. Jeffrey

Associate Dean, School of Public and International Affairs
Dr. Jessica Adolino

Associate Dean, School of Liberal Arts and Social Sciences
Dr. J. Chris Arndt

Associate Dean, Schools of Communication, Information and Media
Prof. Dietrich Maune

Academic Units Within the College

School of Communication Studies
Dr. Eric Fife, Academic Unit Head

Department of English
Dr. Dabney Bankert, Academic Unit Head

Department of Foreign Languages, Literatures and Cultures
Dr. Giuliana Fazzion, Academic Unit Head

Department of History
Dr. Gabrielle Lanier, Interim Academic Unit Head

Department of Justice Studies
Dr. Glenn P. Hastedt, Academic Unit Head

School of Media Arts and Design
Dr. Marilou Johnson, Academic Unit Head

Department of Philosophy and Religion
Dr. Charles Bolyard, Academic Unit Head

Department of Political Science
Dr. Charles H. Blake, Academic Unit Head

Department of Sociology and Anthropology
Dr. Beth Eck, Academic Unit Head

School of Writing, Rhetoric and Technical Communication
Dr. Traci Zimmerman, Interim Academic Unit Head

Graduate Programs

Students may select from a range of graduate programs in the College of Arts and Letters. In addition to departmental programs, the college offers a wide array of annual events and supporting services, some of which reach out to the regional community.

- Communication and Advocacy (M.A.)
- English (M.A.)
- History (M.A.)
- Political Science (M.A.)
- Public Administration (M.P.A.)
- Public Administration – Fifth Year Format (M.P.A.)
- Public Administration – Roanoke (M.P.A.)
- Writing, Rhetoric, and Technical Communication (M.A., M.S.)

Mission Statement

The College of Arts and Letters serves multiple vital needs of JMU students. First, it offers high-quality programs of specialized study in the social sciences, humanities, and communication, and in several pre-professional and cross disciplinary areas. Second, the college provides a challenging array of courses designed to promote lifelong learning by sharpening analytical abilities; improving computational and communications skills; cultivating a facility with written expression; enhancing cultural awareness, intensifying moral and aesthetic sensitivity and fostering awareness of the contingent nature of knowledge. Linking these two missions is a college-wide commitment to free but rigorous and controlled inquiry into human nature.

Annual Events

Visiting Scholars Program

The Visiting Scholars Committee organizes campus visits during the year by 12-15 people who have made significant contributions in their fields. The scholars, who represent a wide variety of disciplines, expose students and faculty members to different perspectives and encourage intellectual exploration. During a visit, a scholar meets with at least one group of students in a class or informal setting and gives a public presentation and discussion of his/her work.

For further information, contact Prof. Dietrich Maune at (540) 568-6472.

College of Business

421 Bluestone Drive
Zane Showker Hall

540.568.3264
www.jmu.edu/cob

Dean
Dr. Mary A. Gowan

Associate Dean, Academic Affairs
Dr. Richard G. Mathieu

Associate Dean, Human Resources and Administration
Ms. Kimberley A. Foreman

Academic Units Within the College

School of Accounting
Dr. Paul A. Copley, Academic Unit Head

Computer Information Systems and Business Analytics Program
Dr. Michel Mitri, Interim Academic Unit Head

Economics Department
Dr. Ehsan Ahmed, Academic Unit Head

Finance and Business Law Program
Dr. Pamela Peterson Drake, Academic Unit Head

Management Program
Dr. Scott R. Gallagher, Academic Unit Head

Marketing Program
Dr. Andy Wood, Academic Unit Head

Master of Science in Accounting
Dr. Nancy B. Nichols, MSA Program Director

Master of Business Administration Program
Dr. Michael E. Busing, Graduate Program Director

Graduate Programs

All degree programs offered by the College of Business are accredited by AACSB International – The Association to Advance Collegiate Schools of Business. Students may select from the following programs in the College of Business:

- Accounting (M.S.)
- Business Administration (M.B.A.)
- Strategic Leadership (Ph.D.)

Mission Statement

The College of Business is committed to preparing students to be active and engaged citizens who are exceptionally well-qualified leaders for success in a global competitive marketplace.

Goals

The JMU College of Business aspires to be among the top five percent of business programs in the nation, striving for excellence and continuous improvement in undergraduate learning. Its student body comes primarily from the Mid-Atlantic region of the United States and, to a growing extent, from the Northeast.

COB faculty members are committed to providing an exceptional educational experience for students, with an emphasis on developing leadership, technology, communication and integrative skills. The COB will be a preferred source of student talent for employers in the Mid-Atlantic region.

The COB takes an entrepreneurial approach to graduate programs, developing niche programs for which there is a need and for which the faculty has competence.

Student learning is assessed frequently. Assurance of learning programs are designed to assess learning in the business core, each of the undergraduate majors, and each of the degree programs within the COB. Consistent with academic freedom, faculty members are encouraged to take an active role in innovative curriculum development and assessment processes designed to improve the educational experience.

The COB recognizes that students and faculty face ethical choices. As such, it maintains the highest expectations for students regarding JMU's Honor Code. Furthermore, the COB strives to prepare students for the ethical tensions and dilemmas they will face in the course of their professional lives. Additionally, the COB demands the utmost in professional and ethical conduct by its faculty towards students, the community of scholars, and society at large.

COB faculty members believe that a balance between teaching and research is the most effective way to educate their students. Scholarly contributions complement classroom teaching by helping faculty members maintain currency in their discipline. Furthermore, students gain a deeper understanding of subject matter, a greater appreciation of a discipline's body of knowledge, and added enthusiasm for learning when they are taught by active scholars.

Faculty members are committed to a broad array of intellectual pursuits and scholarly output in discipline-based scholarship, contributions to practice, and learning and pedagogical research. The relative emphasis on these three areas will vary from one faculty member to another depending upon education, experience, and interests, but the pursuit of knowledge in each area will be used to enhance students' learning experiences.

College of Education

Memorial Hall, Suite 3175
MSC 6907

(540) 568-6572
www.jmu.edu/coe/

Dean
Dr. Phil Wishon

Associate Dean
Dr. Maggie Kyger

Academic Units Within the College

Department of Early, Elementary and Reading Education
Dr. Nancy Barbour, Academic Unit Head

Department of Educational Foundations and Exceptionalities
Dr. John Almarode, Interim Academic Unit Head

Department of Learning, Technology and Leadership Education
Dr. Jane Thall, Academic Unit Head

Department of Middle, Secondary and Mathematics Education
Dr. Steven Purcell, Academic Unit Head

Department of Military Sciences
Lt. Col. Richard Showalter, Academic Unit Head

Mission Statement

The mission of the James Madison University College of Education is to prepare educated and enlightened individuals who can skillfully contribute to the common good of society and who can enter competently into positions of teaching and educational leadership, civic responsibility, and national service. The personal and professional development of students is accomplished by emphasizing excellence and continuous innovation in quality undergraduate, graduate and professional programs.

The College of Education is distinguished through faculty and student achievements, academic rigor, excellence in teaching, student and faculty interactions and relationships, technological innovations, and national recognitions. The college maintains relevance through active and growing interactions with other colleges within the university and with local, state, regional, national and international communities.

The college is committed to providing:

- Undergraduate programs that are composed of or complemented by strong liberal arts preparation, in-depth specialty studies and opportunities for students to develop professional knowledge and skills.
- Graduate programs that support initial teacher licensure emphasizing advanced knowledge in a specialty area and the development of effective leadership and professional skills for addressing the needs of a changing society.
- Continuing professional development and in-service programs in cooperation with public and private schools and agencies, other colleges, institutions, and businesses.
- The undergraduate and graduate 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 these goals:

- To educate men and women for the multiple professions included in the college at both the undergraduate and graduate levels, not merely by transmitting skills and knowledge but by stimulating creativity, developing cognitive abilities and encouraging the testing of hypotheses and reinterpretation of the human experience.
- To encourage a balanced faculty orientation toward teaching, research, scholarship, community service and professionalism that recognizes individual strengths and preferences of the college's faculty.
- To create an environment that fosters an atmosphere of open communication among students, faculty members and community.
- To anticipate societal needs and provide necessary resources for implementing effective off-campus programs now and in the future.

The college has undergraduate and graduate programs that are designed to lead to majors and minors in pre-professional education, initial teacher licensure, advanced programs for teachers, educational leadership, adult education, human resource development and military science.

Programs and Licensure

To become a licensed teacher, students complete a major in one of several approved fields of study, depending upon the type of teaching license pursued, in addition to a pre-professional licensing program.

With the exception of the four-year Teaching English to Speakers of Other Languages program, the teacher licensure programs offered in the College of Education are completed during the fifth year Master of Arts in Teaching program.

Students wishing to become licensed teachers in inclusive early childhood, elementary or middle education should major in Interdisciplinary Liberal Studies (IdLS) and complete a pre-professional licensure program specific to the teaching license pursued at the undergraduate level. Students wishing to become licensed teachers in K-12 Special Education major in IdLS, psychology or another major approved by the program coordinator and complete a pre-professional program at the undergraduate level. Individuals wishing to become licensed teachers in ESL and attain a graduate degree while seeking licensure, major in modern foreign languages, English or another major approved by the program coordinator and complete a pre-professional program at the undergraduate level.

Students seeking licensure in secondary education major in the subject area in which they wish to become licensed (i.e. biology, history, chemistry, etc.) and complete a pre-professional licensure program in secondary education at the undergraduate level. See the specific major requirements in the individual colleges holding the major. Students enrolled in undergraduate pre-professional programs are assigned two advisers. One adviser is the adviser for the education pre-professional licensure program who will guide the student through the licensure program requirements. The other adviser is the major adviser who will guide the student through the major requirements. Students should plan on consulting both advisers regularly. The education adviser is usually assigned when the student has met all the requirements for the admission into teacher education, typically during a student's sophomore year. The major adviser is assigned when the first year student advising folders are transferred to the major departments (second semester, first year). Students are required to check with advisers regularly to ensure timely graduation.

Undergraduate students pursuing licensure to teach through one of the five-year M.A.T. programs described in this catalog should:

- Meet requirements indicated by the respective program prior to submitting an application to The Graduate School.
- Apply for admission to The Graduate School according to departmental deadlines.
- Complete all pre-professional studies requirements before enrolling in graduate courses in education.

These initial licensure programs are offered at the graduate level for those having baccalaureate degrees:

- Early Childhood Education
- Elementary Education
- Inclusive Early Childhood Special Education (program completers meet Virginia licensure requirements for Early Childhood Education and Special Education: Birth-Age 5).
- Teaching English as a Second Language (TESL)
- Middle School Education
- Physical and Health Education
- Secondary Education
- Special Education K-12

Advanced programs are offered at the graduate level for licensed teachers or other school personnel:

- Educational Leadership
- Educational Technology
- Master of Education: Special Education
- Mathematics Specialist K-8
- Reading Education

Professional Education Coordinating Council

The Professional Education Coordinating Council (PECC) is the official governing body within the university responsible for the preparation of teachers and other school personnel. The membership of the PECC includes the coordinators or representatives of all initial licensure and advanced study programs in education, a representative from the IdLS major, the director of assessment and the directors of the Education Support Center and the Educational Technology and Media Center. The Dean of the College of Education serves ex officio as head of the Professional Education Unit. The Associate Dean for Academic Programs serves as the chair of PECC.

Teacher Education Conceptual Framework

The JMU conceptual framework is a guiding set of principles, beliefs and concepts that provide a basis for designing, implementing, monitoring, assessing and changing programs that prepare teachers and other educators who work closely with children and others in school settings. The overarching purpose, therefore, is to produce resilient, effective educational professionals for a dynamic and changing society.

The JMU Conceptual Framework is grounded in the best of what we know about learning, teaching, and development, and is further based on a moral mission; that is, the work of teachers affects the lives of human beings. In a human sense, it makes a difference in people's lives; in a larger sense, education contributes to societal development and democracy.

The conceptual framework reflects our recognition that teaching is a complex and difficult task, requiring a significant degree of education, training, and experiences in order to meet the learning needs of all children, regardless of age, culture, condition or ability.

The programs at JMU rely on collaborative partnerships with schools and other community agencies, strong field-based teacher development, a continuum of skills development and reflective professional practice.

Program completers, therefore, should be skilled and adept in a set of competencies that are based on the propositions found in the Conceptual Framework. Those competencies include demonstrating:

- Certain personal qualities and dispositions reflective of a professional educator.
- Deep understanding of the content to be taught and ways to effectively teach the content.
- An understanding of the impact of research on learning and development and how culture influences development.
- An understanding of how students differ in approaches to learning and creating instructional opportunities for diverse learners.
- Skill in effective planning for learning.
- Skill in a wide variety of instructional strategies and technologies.
- Skill at creating positive, effective learning environments.
- The use of effective verbal, non-verbal, and media techniques that foster inquiry, collaboration, and positive interactions.
- Skill in a variety of effective assessment techniques.

- The ability to reflect on practice, adjust teaching methods and techniques, and seek professional growth.
- Skill in developing positive relationships with parents, colleagues and families.

Education Support Center

www.jmu.edu/coe/esc/

The Education Support Center (ESC) has four major responsibilities:

- monitors admission to, and retention in, the professional education program
- coordinates field experiences for all programs
- approves applications for Virginia Licensure
- serves as the center for information about professional education programs

Information and application materials for admission to teacher education, appeals, registration for PRAXIS exams, student teaching and licensure are available on the Education Support Center website, as well as information regarding costs associated with required tests and subscriptions to Tk20.

Admission to Teacher Education

Candidates who want to pursue a course of study leading to the initial Virginia teaching license must be admitted to the teacher education program. Admission is a prerequisite to most education courses; candidates not admitted to teacher education will be blocked from registering for those courses.

Application Process

Students enrolled in a five-year M.A.T. program must be fully admitted to teacher education during their undergraduate, pre-professional program (see the undergraduate catalog). Students enrolled in other initial teacher licensure programs must meet the following requirements to be fully admitted into Teacher Education.

Students must complete all teacher education requirements for admission as outlined below and submit:

- Program of study letter obtained from the student's education adviser that specifies required courses for the licensure programs
- Copy of transcripts from other institutions

Application Process

Students must complete the following steps to apply to the teacher education pre-professional licensure program. Additional information is available at the ESC website:

1. Declare a major and a pre-professional licensure program. The form should be signed by the student's education adviser and submitted to the Registrar's Office.
2. Apply to Teacher Education.
3. Submit two reference forms.
4. Take the Praxis I: Academic Skills Assessment. Praxis scores may be waived if a student's SAT scores or ACT scores qualify. See the Education Support Center website for more information.
5. Complete online training in Universal Precautions.
6. Complete the Child Abuse Prevention Training online.
7. Complete the following course requirements with a minimum grade of "C:" *G*WRTC 103 or equivalent, MATH or Cluster Three equivalent, and *G*PSYC 160 or equivalent. Student must provide ESC with a transcript of any courses from other institutions that do not appear on the JMU transcript.
8. Complete the Multicultural Dispositions Index (MDI: Thompson, 2011).
9. Have and maintain a GPA of 2.5 or better.
10. Have no record of any felony conviction or misdemeanors involving children or drugs, or founded complaint of child abuse or neglect.

Students can check the status of their admission to the teacher education program online at the ESC website at www.jmu.edu/coe/esc.

After completing the above requirements, students are to subscribe to Tk20 and purchase a student account ($100 fee; see the ESC website).

Application Deadlines

In order to enroll in required education courses, undergraduate candidates must complete all teacher education admissions requirements by the first day of registration for the semester in which they want to enroll in required education course work.

Transfer, post-baccalaureate and graduate candidates should apply during the first term of enrollment at JMU.

Field Experiences

Field experiences (including practica and internships) are required for candidates in all programs of the professional education unit. The number and nature of these experiences may differ based on program structure and candidates' individual needs and/or goals. Transportation and other arrangements for the practicum and internship courses/experiences will be the candidate's responsibility.

Student Teaching

Student teaching is required as an integral part of the sequence of professional experiences in all teacher education programs.

Its purpose is to enable pre-service teachers to apply acquired skills, understandings and attitudes in K-12 classrooms or comprehensive child development programs. Each individual licensure program determines the length of its particular student teaching experience.

The Education Support Center coordinates the student teaching program with participating school divisions, assigning all candidates to their student teaching sites and assisting in the planning and supervision of their work. Experienced teachers serve as cooperating teachers who coach and mentor the student teachers in their classrooms. University supervisors have the major responsibility for the supervision and evaluation of student teachers. Student teaching is graded on a credit/no-credit basis.

Candidates must student teach in the area for which they are seeking licensure or endorsement. A candidate seeking endorsement in more than one general area must complete a student teaching experience in each area.

Student teaching placements are made in accredited Virginia public and private schools, programs and agencies.

Most placements are made within approximately one hour's driving distance from campus. Some programs also place students in northern Virginia, Richmond and/or Tidewater, and Roanoke. Other local and non-local placement sites may be assigned in accordance with individual program and/or student needs. All placements are based on availability and efficiency of appropriate supervision. Student teaching is a full-time experience. Permission to take additional course work will be made only in exceptional cases. Student teachers should not expect to work or participate in excessive extracurricular activities during student teaching. Students with problems and/or special needs must contact the Director of the Education Support Center for prior approval.

Opportunities exist for qualified candidates to complete a portion of their student teaching at international locations. Those interested in pursuing this option must meet additional requirements and have permission of their programs at time of application to student teach. Refer to the ESC website for additional information.

Student Teaching Criteria

To be approved for student teaching, all candidates must:

- be fully admitted to teacher education.
- submit a student teaching application.
- meet the required GPA.
- successfully complete all prerequisite courses for student teaching.
- be recommended for student teaching by their licensure program.
- meet any additional admission and retention standards of their academic department or school.
- be free from exposure to communicable tuberculosis.

Application Deadlines

Student teaching applications are accepted during the fall semester for the next academic year. It is the student's responsibility to be aware of all application requirements and deadlines.

Teacher Education Licensure

In order to be eligible for licensure, teacher education candidates must meet all requirements for completing the licensure program. Those candidates interested in being licensed in Virginia must apply because this license is not issued automatically. Virginia licensure requirements include the Virginia Communication and Literacy Assessment (VCLA) for all licensure areas and the Praxis II Specialty Area Tests for most licensure areas. Virginia also requires the Reading for Virginia Educators for selected programs.

Out-of-State Licensure

It is recommended that candidates applying for out-of-state licenses first obtain the Virginia license. Out-of-state licensure requirements and application forms must be obtained directly from the desired state agencies. Note: Other states may have additional testing and GPA requirements that the applicant must meet.

Educational Technology and Media Center

(540) 568-6302 www.jmu.edu/coe/etmc/

The primary goal of the Educational Technology and Media Center (ETMC) is to support students, faculty and staff in their effective use of technologies to support learning. This goal is achieved through access, instruction and promotion of educational technologies available within the center.

ETMC houses more than 5,000 items including K-12 textbooks, DVDs and videotapes, microcomputer software, and a variety of other instructional resources. The center also houses the children and youth literature collection of James Madison University totaling more than 15,000 volumes.

Computers throughout the facility allow students to work with computer assisted instruction, web page creation, word processing, digital images, analog and digital video, page layout, data analysis, and the creation of multi-media computer presentations. These presentations can be taken into educational technology classrooms around the university. The growing capabilities in instructional technology are evident in this center where interactive video conferencing, video-streaming and other newly emerging technologies expand the potential for learning in multiple environments.

For those desiring licensure in Virginia's schools, ETMC provides opportunities to learn and use many forms of instructional technology. ETMC has a range of production facilities including traditional media, audio and video editing areas, and digital technologies that enable faculty members and students to produce various types of instructional materials. College of Education students may also check out digital cameras, camcorders and audio recorders.

College of Health and Behavioral Studies

MSC 4101
701 Carrier Drive
(540) 568-2705
http://chbs.jmu.edu

Dean
Dr. Sharon E. Lovell

Interim Associate Dean
Dr. Paula Maxwell

Associate Dean
Dr. Rhonda M. Zingraff

College Mission

We engage students, faculty and communities in learning, scholarship, and service in health and behavioral studies to inspire responsible contributions to our world.

Academic Units Within the College

Department of Communication Sciences and Disorders
Dr. Cynthia O'Donoghue, Academic Unit Head

Department of Graduate Psychology
Dr. Robin Anderson, Academic Unit Head

Department of Health Sciences
Dr. Allen Lewis, Academic Unit Head

Department of Kinesiology
Dr. Christopher J. Womack, Academic Unit Head

Department of Nursing
Dr. Julie Sanford, Academic Unit Head

Department of Psychology (undergraduate programs)
Dr. Kevin Apple, Interim Academic Unit Head

Department of Social Work
Dr. Lisa McGuire, Academic Unit Head

Graduate Programs

The College of Health and Behavioral Studies consists of seven departments, five of which provide graduate programs. JMU's graduate programs in the College of Health and Behavioral Studies offer the following degrees:

- Assessment and Measurement (Ph.D.)
- Clinical Audiology (Au.D.)
- Clinical Mental Health Counseling (M.A., Ed.S.)
- College Student Personnel Administration (M.Ed.)
- Combined-Integrated Clinical and School Psychology (Psy.D.)
- Communication Sciences and Disorders (Ph.D.)
- Communication Sciences and Disorders (M.S.)
- Counseling and Supervision (Ph.D.)
- Health Sciences – Dietetics (M.S.)
- Kinesiology – fifth year format (M.A.T.)
- Kinesiology (M.S.)
- Nursing (M.S.N., D.N.P.)
- Occupational Therapy (M.O.T.)
- Physician Assistant Studies (M.P.A.S.)
- Psychological Sciences (M.A.)
- School Counseling (M.Ed.)
- School Psychology (M.A., Ed.S.)
- Speech-Language Pathology (M.S.)

Cross Disciplinary Programs, Outreach Programs, Partnerships, Academic Centers & Institutes

The College of Health and Behavioral Studies places a high value on partnerships with the community. These partnerships and our outreach programs are integral to our academic programs and assist us in meeting our responsibility to participate in efforts to enhance the well-being of our community. We value the impact of experiential activities on the enrichment of student learning. Many of the programs within the college are cross disciplinary in nature, reflecting our commitment and supporting the mission of the college. Further details about these cross-disciplinary programs are provided on the CHBS website.

College of Integrated Science and Engineering

701 Carrier Drive, MSC 4116
Harrisonburg, VA 22807

(540) 568-8841
http://cise.jmu.edu

Dean

Dr. Robert A. Kolvoord

Associate Dean

Dr. Jeffrey D. Tang

Academic Units Within the College

Department of Computer Science

Dr. Sharon J. Simmons, Academic Unit Head

Department of Engineering

Dr. Kurtis G. Paterson, Academic Unit Head

Department of Integrated Science and Technology

Dr. Eric H. Maslen, Academic Unit Head

Graduate Programs

The College of Integrated Science and Engineering offers the following graduate degrees:

- Computer Science (M.S.)
  - Information Security
  - Digital Forensics
- Computer Science – Fifth Year Format (M.S.)
  - Information Security
  - Digital Forensics
- Integrated Science and Technology (M.S.)
- Integrated Science and Technology (M.S.) – joint degree program with the University of Malta

Mission

The College of Integrated Science and Engineering encompasses programs whose common focus is solving problems that impact the world at large through both the application of science and technology and the consideration of the social context in which the problem sits.

Over the past several decades, remarkable developments in science and technology have altered our lives and our society, bringing both great opportunities and challenges. Continued prosperity and societal harmony depend on the integration of scientific knowledge, the creative use of engineering design, technical capabilities in computing and other fields, the application of ethical principles and an understanding and appreciation of cultural commonalities and differences. Consequently, there is a need for individuals who understand the importance of specialization, as well as cross-disciplinary connections, and also the integration of knowledge for practical application. These individuals must have the flexibility to be able to operate in an environment of uncertainty and complexity, the drive to seize such opportunities as they arise and the vision and creativity to create new opportunities as needed. Our faculty is dedicated to producing graduates with a scientific and technical knowledge base and a matching set of interpersonal, organizational and technical skills. To this end, our faculty members not only educate our students, they also inspire and serve as role models.

The college places importance on carrying out its role within the community of Academic Affairs, working collaboratively with other colleges and supporting division-wide programs and priorities.

Mission Statement

The College of Integrated Science and Engineering, by supporting its constituent academic programs, seeks to build a community of students, faculty and staff who share a common purpose of improving our world through the cultivation of integrated sciences and engineering.

Goals

The goals of the College of Integrated Science and Engineering are:

- To promote a student-centered focus in teaching, scholarship and service that encompasses excellence, collegiality and professionalism.
- To foster, among both faculty and students, life-long professional development, personal growth, and commitment to ethical behavior.
- To contribute to the betterment of society at local, regional, national and global levels with a focus on sustainable solutions.
- To prepare students to enter professions of value to our community, through the study of applied science and engineering within a social context, or to undertake advanced study.
- To support a community of faculty that pursues high-quality, innovative and cross disciplinary instruction, scholarship and service.
- To emphasize innovation.
- To encourage partnerships both within and outside the university.

College of Science and Mathematics

Bioscience Building, Suite 3001
951 Carrier Drive, MSC 4114
Harrisonburg, VA 22807

(540) 568-3508
www.jmu.edu/csm

Dean
Dr. David Brakke

Associate Dean
Dr. Judith Dilts

Academic Units Within the College

Department of Biology
Dr. Joanna B. Mott, Academic Unit Head

Department of Chemistry and Biochemistry
Dr. Linette M. Watkins, Academic Unit Head

Department of Geology and Environmental Science
Dr. Stephen A. Leslie, Academic Unit Head

Department of Mathematics and Statistics
Dr. David C. Carothers, Academic Unit Head

Department of Physics and Astronomy
Dr. C. Steven Whisnant, Academic Unit Head

Graduate Programs

The College of Science and Mathematics offers the following graduate degrees:

- Biology (M.S.)
- Mathematics (M.Ed.)

Mission

The College of Science and Mathematics is dedicated to excellence in undergraduate education and research. Our outstanding programs are student-centered and designed to prepare students for responsible positions at all levels in research, industry, education, medicine and government. We emphasize learning by doing science and provide active learning experiences in a range of settings. We also encourage collaborative research with faculty, internships and other experiences that facilitate transitions to work or graduate/professional education.

We provide the following:

- foundational understanding of science and mathematics for the educated citizen.
- the educational basis and technical skills to prepare science and mathematics students for the workforce.
- the theoretical and practical foundations for success in professional and graduate programs.
- an exemplary program in mathematics and science for prospective teachers.

Resource and Service Centers

Astronomy Park

(540) 568-4511 http://csma31.csm.jmu.edu/physics/scully/outreach.html

Located on the east side of campus near the Physics and Chemistry building is a permanent area for sky observing on campus. There are permanent mounts for six portable 10-inch computer controlled telescopes and an area for a portable 14-inch telescope. This site provides a convenient area for sky observing for introductory astronomy students. Students are able to easily see the moon, planets, nebulae, galaxies, star clusters as well as the sun using the appropriate solar filters. The department is also equipped with CCD cameras, spectrometers, a photometer, and multiple solar filters that provide more advanced students with experience in astrophotography and data collection techniques. The public is invited to attend public star gazes which are held several times each semester.

The Center for Computational Mathematics and Modeling

Phone: (540) 568-6614

This cross disciplinary institute for scientific computing, houses state-of-the-art graphics workstations and a 16 PII node beowulf computer system. The beowulf computer system is a parallel computing environment that can be used on large-scale problems. Faculty and students will have access to this "super computer" from the center and from their offices. The center also operates an Immersive 360º Visualization System. The center uses mathematics both to simulate real-world phenomena and to generate visual data.

Faculty members from the sciences, economics and business disciplines interact with mathematicians to model problems that they are researching with undergraduate students.

Center for Materials Science

(540) 568-8069 http://csm.jmu.edu/materialsscience

The educational mission of the Center for Materials Science is to develop and maintain an innovative interdisciplinary and multidisciplinary undergraduate program in materials science that will increase the maturation of students, their research experience and their employment opportunities. The mission includes the integration of undergraduate education with basic and applied research in materials science.

Faculty in the Center for Materials Science have expertise in a wide variety of areas including inorganic and organic synthesis, microfabrication, nanotechnology, thin film growth and surface modification, materials characterization, and modeling and simulation of complex systems. The facilities include a class 10000 clean room, electron beam lithography, and many types of microscopy and other analytical techniques. A more complete description of the instrumentation and facilities is available at http://csm.jmu.edu/materialsscience/facilities.html. Collaborative work is welcome and can include consultation with faculty, assignment of student projects, or simply access to facilities.

Department of Chemistry & Biochemistry LC/MS Facility

(540) 568-6633

The JMU liquid chromatography/mass spectrometry (LC/MS) undergraduate research facility, housed within the Department of Chemistry & Biochemistry, was established in 2010 with two Major Research Instrumentation (MRI) grants from the National Science Foundation.

The LC/MS instruments housed in the facility include: (1) an Agilent 6460 triple quadrupole (QQQ) mass spectrometer coupled to two Rapid Resolution LC pumps and a diode array detector, (2) an Agilent 6224 time of flight (TOF) mass spectrometer coupled to an Infinity UHPLC pump, and (3) an Agilent 6530 quadrupole time of flight (q-TOF) mass spectrometer coupled to an Infinity UHPLC pump. All three instruments are equipped with an electrospray source. The time of flight instruments afford the high mass accuracy and high resolution necessary for identification of unknowns in complex mixtures. The MS/MS capability of the q-TOF affords additional structural information. The sensitivity of the QQQ makes this instrument ideal for small molecule quantitation. Together, these three instruments provide a robust platform for the qualitative and quantitative analysis of biological and environmental samples.

JMU Regional Undergraduate Laser Facility

(540) 568-8811

Lasers are an essential part of our modern society. They are components of home electronics, manufacturing equipment, surgical procedures, atmospheric monitoring devices, and also are a key piece of technology for chemical research. Lasers have transformed modern chemistry. Currently, chemists are able to use lasers to initiate, control, and watch chemical reactions on a scale that was unimaginable 50 years ago. James Madison University has a large laser spectroscopy laboratory that distinguishes it from other primarily undergraduate institutions. Researchers are able to utilize the Facility's holdings to perform an abundance of interdisciplinary scientific research.

The JMU Regional Undergraduate Laser Facility has grown through many years of support from the National Science Foundation. Holdings include Nd/YAG, Nitrogen, helium/neon, argon ion, and diode lasers. The facility is also equipped with an array of diagnostic tools for laser spectroscopy including an Agilent Infinium 1 GHz digital oscilloscope, five 25 MHz to 400 MHz digital oscilloscopes, a Jarrell-Ash ½ meter scanning monochromator, a CVI digital monochromator, and a Princeton instrument silicon detector array. On-going research with tools in this facility include the synthesis and characterization of luminescent transition metal complexes for use as molecular probes or reporters.

Most recently, the laser facility has received support from the National Institute of Standards and Technology, the James Madison University Department of Chemistry and Biochemistry, and a Research Corporation Department Development Award. New acquisitions include a variety of tunable single-mode diode lasers including a 75 nm New Focus Velocity laser and five NTT:NEL distributed feedback diode lasers for gas sensing of O2, H2O, CO2, and CH4. Additional diagnostic tools include a Bristol Instruments NIR ±60 MHz wavemeter, a Stanford Research Systems 100 kHz spectrum analyzer, and a temperature-stabilized etalon. Emerging research on precision lineshape measurements, gas-sensing of atmospherically relevant small molecules, and optical properties of particulate matter is now underway in the JMU Regional Undergraduate Laser Facility using photoacoustic spectroscopy and cavity ring-down spectroscopy.

Medicinal Research Collaborative

http://csma31.csm.jmu.edu/chemistry/faculty/minbiole/JMUMRC/

The Medicinal Research Collaborative is an assembly of researchers who share ideas and pool resources to advance medicinal research at James Madison University. Members come from a variety of scientific departments and represent a diversity of expertise. And since members of the collaborative often team up on research, the MRC presents a set of highly interdisciplinary projects that aim to advance fundamental science that supports medicine. Key liaisons include researchers at SRI – Shenandoah Valley, a non-profit organization with a new research site in Harrisonburg, as well as other members of the JMU community with ties to medicine and intellectual property.

Electron Microscopy Center

(540) 568-6421 http://csm.jmu.edu/materialsscience/microscopy.html

The Electron Microscopy Center serves faculty, staff and students who wish to use the scanning electron microscopy in scientific investigations. The center also provides demonstrations for public school groups and specialized educational programs.

JMU Meteorite Collection

(540) 568-2312 http://csma31.csm.jmu.edu/physics/outreach.html#meteorites

The James Madison University Meteorite Collection is a growing collection of the many sorts of meteorites to strike the Earth, and is located on the second floor or the Physics/Chemistry building. The display is open to the public year-round during university business hours, and after hours by special arrangement.

Microscopy Facility

(540) 568-4521 http://csm.jmu.edu/biology/microscopy/

The Biology Department's Microscopy Facility is equipped with several light and fluorescence microscopes, including a Nikon C1 Confocal Laser Scanning Microscope, enabling time lapse imaging, 3-D image reconstruction and fluorescence imaging. The facility has a dedicated staff member who can provide training on the equipment and help faculty and students with any microscopy aspects of their research projects.

Mineral Museum

(540) 568-6421 http:www.jmu.edu/geology/museum.html

Housed with the Department of Geology, the JMU Mineral Museum contains more than 700 exceptionally beautiful display specimens that provide mineralogy students with outstanding visual examples of some of the finest crystals from around the world. Each year, numerous educational groups, mineralogical societies and individual collectors visit the collection.

Observatory

(540) 568-6153

Located at the Stokesville, Virginia, Campground, a 14-inch telescope is permanently mounted under a 16-foot dome. A set of 10 piers surround the observatory building and provide easy set-up for the observatory's eight, eight-inch telescopes. This site provides dark-sky observing for introductory astronomy students. A photometer, solar filters and a CCD imaging system provide more advanced students with experience in astrophotography and data collection techniques. During the summer months, public access is regularly available on Friday and Saturday nights.

Office of Statistical Services

(540) 568-6968

Through this office, statistics faculty members and students provide JMU and the local community with assistance in the design and analysis of statistical surveys and experiments. Students obtain practical experience and an appreciation for the impact of statistical methods on today's society.

Planetarium - John C. Wells Planetarium

(540) 568-4071 http:www.jmu.edu/planetarium/

Located in Miller Hall, the planetarium serves as a teaching laboratory for both the undergraduates and the local community alike. The facility is used as a resource for introductory astronomy classes and well as welcoming school groups from the region. Several public planetarium shows are offered every month that vary with the seasons. The planetarium is equipped with a GOTO- Chronos/Digistar-3 hybrid planetarium system that offers full dome video as well as exceptionally clear and accurate simulations of the night sky.

Science and Mathematics Learning Center

(540) 568-3379 www.jmu.edu/smlc/

The College of Science and Mathematics has established a Learning Center for Science and Mathematics located on the second floor of Roop Hall. The center, which is a part of the JMU Student Success Center, provides extra help with math and science for students in general education and beginning science courses. The center is staffed by five full-time coordinators and carefully selected upper level science and mathematics majors.

Shenandoah Valley Regional NMR Facility

(540) 568-3683 www.jmu.edu/chemistry/svrnmr/

This nuclear magnetic resonance facility has been established with grants from The National Science Foundation (9650132), The Merck Foundation, and matching funds provided by James Madison University, Eastern Mennonite University and Bridgewater College.

NMR spectrometers at the facility include a Bruker Avance DPX-300 NMR, equipped with a variable temperature 5mm QNP (capable of observing 1H, 13C, 19 F or 31P) or a broad band tunable probe and a Dell host computer.

The facility also has a Bruker Avance DRX-400 NMR, equipped with a six position autosampler, a variable temperature 10mm broad band tunable probe, variable temperature 5mm broad band tunable probe with a Z gradient and a Dell host computer. Recently a Bruker Avance Ultra High Shield Plus 600 NMR was installed, equipped with a variable temperature 5mm broad band tunable probe, BST upper shim stack, Bruker Orthogonal Shim System (BOSS-2), and Bruker Smart Magnet System (BSMS) shim and Digital Lock control unit and a Dell host computer. These instruments are housed at JMU and accessed remotely by the participating regional colleges and universities. Currently the systems are running TOPSPIN 1.3 software.

A website, www.jmu.edu/chemistry/svrnmr/, has been established as a means of communicating the efforts of the Regional NMR Consortium to the local scientific community and other interested parties. This group is composed of chemists from Bridgewater College, Eastern Mennonite University, James Madison University and Mary Baldwin College.

Annual Events

Physics is Phun Science Show

(540) 568-6353

During the spring the Department of Physics and Astronomy in conjunction with the Society of Physics Students offers science shows to student groups from grades 6-12. Topic rooms are arranged with presentations and demonstration in various areas of physics and the visiting students rotate among the rooms. JMU faculty and students share their experience and knowledge of science in an engaging format. Typical shows run about two hours.

Science Fair

(540) 568-7938

The Shenandoah Valley Regional Science Fair has been administered by the JMU science faculty for the past 36 years. The science fair is a competition open to all students in grades 6-12 who live in Virginia's Shenandoah Valley. For further information, contact Dr. Thomas DeVore in the Department of Chemistry and Biochemistry at (540) 568-7938.

SUMS Conference

(540) 568-6184

Each fall the Department of Mathematics and Statistics hosts the Shenandoah Undergraduate Mathematics and Statistics (SUMS) Conference, a one-day undergraduate research conference. The SUMS Conference gives undergraduates from JMU and around the country who have completed original mathematical research a chance to present their work to their peers. For further information, visit www.jmu.edu/mathstat/sums/.

College of Visual and Performing Arts

MSC 2107
Shirley Hanson Roberts Center

(540) 568-7131
http://cvpa.jmu.edu/

Dean

Dr. George Sparks

Associate Dean

Dr. Sonya Baker

Academic Units Within the College

School of Art, Design and Art History

Dr. Katherine Schwartz, Academic Unit Head

School of Music

Dr. Jeffrey Bush, Academic Unit Head

School of Theatre and Dance

Dr. Terry Brino-Dean, Academic Unit Head

Graduate Programs

The College of Visual and Performing Arts offers the following graduate programs:

- Art (M.F.A.)
- Art Education (M.A.)
- Music (M.M.)
- Music (D.M.A.)
- Studio Art (M.A.)

Mission Statement

The College of Visual and Performing Arts is founded on the belief that artistic expression reveals the essential nature and diversity of human experience. Embracing traditional practices as well as contemporary approaches and technologies, the College provides a stimulating environment in which students create, perform, interpret, research, teach and think critically about the arts. The College actively supports creative and scholarly endeavors, collaboration between faculty and students, and interdisciplinary exchange. We are committed to making the arts an integral part of the life of the university and advancing their visibility, accessibility and understanding throughout the region and the world.

Goals

The programs in the college are committed to achieving the following common objectives:
To prepare students to be articulate, effective, and inspiring performers, educators, creators, scholars and professionals in the arts.

- To attain recognition and leadership in the arts at the regional, national and global levels.
- To enhance, develop and sustain undergraduate and graduate programs of distinction.
- To support cultural, aesthetic and intellectual diversity, and to foster interdisciplinary exchange.
- To offer students instruction and learning experiences that incorporate the latest technology, research and practices.
- To engage the surrounding community as an active partner in promoting and experiencing the arts.

Resources and Events

artWorks Gallery

(540) 568-6918

www.jmu.edu/jmuarts/galleries/artworks.shtml

The artWorks Gallery features rotating exhibits of JMU undergraduate and graduate student work. The gallery is managed by students in the School of Art, Design and Art History. The gallery is located a short walk from Duke Hall on the second floor of 131 Grace Street, JMU, Harrisonburg, VA. The artWorks Gallery is a curricular component of the School of Art, Design and Art History.

Forbes Center for the Performing Arts

(540) 568-7000

www.jmu.edu/jmuarts

Comprised of the Dorothy Thomasson Estes Center for Theatre and Dance and the Shirley Hanson Roberts Center for Music Performance, the Forbes Center houses five state-of-the-art performance venues: the Mainstage Theatre (450 seats), the Concert Hall (600 seats), the Recital Hall (196 seats) the Studio Theatre (200 seats) and the Earlynn J. Miller Dance Theatre (200 seats).

The center is home to the Masterpiece Season, featuring a variety of cultural events for JMU and the entire community. The schools of Art, Design and Art History; Music; and Theatre and Dance all take an active role in this series. The season also includes the Encore and Family Series featuring visiting artists such as Imago Theatre, Liz Lerman Dance Exchange, Bobby McFerrin, Denyce Graves, Victor Ekpuk, and Alex Bay.

Institute for Visual Studies

(540) 568-5656 www.jmu.edu/ivs/

The Institute for Visual Studies is a center for scholarly, scientific and creative inquiry into the nature and workings of images. An incubator of new ideas, the institute fosters discovery, and the generation of artworks, products, and applications by multidisciplinary teams of students and faculty. The Institute for Visual Studies is a collaboration of faculty representing all colleges at the university. It is located in Roop Hall, room 208.

Madison Art Collection

(540) 568-6934 www.jmu.edu/madisonart/

madisonart@jmu.edu

The Madison Art Collection provides unique opportunities for students, faculty and the surrounding community to learn about a wide range of world cultures through the exploration of its collection of over 35,000 objects. Exhibitions, class projects and special programming allow public access to the areas of collection strength, which include funerary objects from ancient Egypt, ceramics and glassware from classical Greece and Rome, West African masks and textiles, Russian icons, Japanese Edo prints, and Russian icons. The Madison Art Collection also houses a significant collection of European and American objects, such as letters and manuscripts from King George I of England, Florence Nightingale and Victor Hugo as well as the archive of American Emmy award-winning production designer Charles Lisanby, the only artistic designer to be inducted in the Academy of Television Arts and Sciences Hall of Fame. Scholars may apply for access to study Madison Art Collection objects at the Charles Lisanby Center, located in the Festival Conference and Student Center.

The Madison Art Collection has two exhibition venues, both located in the Festival Conference and Student Center. The Lisanby Museum showcases exhibits drawn from the permanent collection and uses technological applications such as smart device applications and QR codes to allow visitors to craft their experience with the objects. Prism Gallery and Prism International exhibit works emphasizing aspects of diversity, including areas of culture, religion, gender and sexuality.

New Image Gallery

(540) 568-6918 www.jmu.edu/jmuarts/galleries/newImage.shtml

New Image Gallery is a professional photography gallery featuring contemporary photography of regional and national significance. New Image Gallery is located on the second floor of 131 Grace Street, JMU, Harrisonburg, VA. New Image Gallery is a curricular component of the School of Art, Design and Art History.

Sawhill Gallery

(540) 568-6918 www.jmu.edu/jmuarts/galleries/sawhill.shtml

Sawhill Gallery is a professional art gallery featuring changing exhibitions of international, national and regional significance. In addition to providing exhibitions of contemporary art, a hallmark of the gallery's mission is to demonstrate art's multicultural and interdisciplinary dynamic. Sawhill Gallery is located in Warren Hall, Fourth floor. Sawhill Gallery is a curricular component of the School of Art, Design and Art History.

Accounting

www.jmu.edu/accounting/MSA.shtml

Director, School of Accounting

Dr. Paul Copley

Phone: (540) 568-3081

Graduate Program Director

Dr. Nancy Nichols

Phone: (540) 568-8778

Professors

C. Baril, P. Copley, D. Fordham, A. Gabbin, T. Louwers, N. Nichols, D. Riordan, M. Riordan, B. Roof

Associate Professors

L. Betancourt, J. Briggs, D. Hayes, R. Richardson, W. VanDenburgh

Assistant Professor

S. Cereola

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
- Cost Accounting
- Federal Income Tax Accounting
- Intermediate Accounting I
- Intermediate Accounting II

Business Courses

- Business Law
- Macro Economics
- Managerial Finance
- Micro Economics
- Organizational Behavior
- Principles of Management
- Statistics

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 non-business 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.

Master of Science in Accounting Program

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 600 level.

M.S. in Accounting Requirements

Required Courses	Credit Hours
Choose one of the following:	3
ACTG 625. Tax Research [1]	
ACTG 640. Accounting Information Technology and Research	
ACTG 675. Accounting Theory	
MBA 630. Financial Management	3
Accounting electives (600 level) [2]	15

Electives (500 or 600 level) [3]	9
	30

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.
3 One elective must be outside of accounting.

Concentrations

The accounting program offers two specialty concentrations, the Accounting Information Systems (AIS) concentration and the Taxation concentration.

Accounting Information Systems

The AIS concentration requires the student to complete nine hours of computer or technology-related courses. These courses offer the student the opportunity to gain more expertise and proficiency in areas such as network design and construction, telecommunications, systems development and programming, advanced database design, expert systems, and information security. Students completing the AIS concentration are in very high demand by employers.

AIS Concentration Requirements

Required Courses	Credit Hours
ACTG 640. Accounting Information Technology and Research	3
ACTG 691. Computer Forensics for Accountants	3
ACTG 690. Information Security and Control	3
or alternative course approved by the M.S.A. director	
	9

Taxation

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

Required Courses	Credit Hours
ACTG 625. Tax Research and Strategy	3
ACTG 627. Advanced Taxation of Business Entities I	3
ACTG 628. Advanced Taxation of Business Entities II	3
ACTG 629. Selected Topics in Taxation	3
	12

Course Offerings

Accounting

ACTG 594. Business Practicum for Accountants. *1-3 credits.*
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 course work. It is the expectation that students taking 594 will have significant accounting classes to complete when they return to JMU from the internship. *Prerequisite: Permission of internship director.*

ACTG 625. Tax Research and Strategy. *3 credits.*
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 the instructor.*

ACTG 627. Advanced Taxation of Business Entities I. *3 credits.*
Considers federal tax consequences across business entities, including sole proprietorships, partnerships, corporations electing "S" status and corporations. *Prerequisite: Master of Science student or permission of the instructor.*

ACTG 628. Advanced Taxation of Business Entities II. *3 credits.*
Continuation of ACTG 627 dealing with more in-depth tax issues involving partnerships, corporations and "S" corporations. Potential topics include distributions, liquidations, reorganizations and affiliations. Emphasizes problem identification, tax treatment and tax planning strategies. *Prerequisite: ACTG 627.*

ACTG 629. Selected Topics in Taxation. *1-3 credits.*
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 the instructor.*

ACTG 630. Seminar in International Accounting. *1-3 credits.*
Designed to develop a fundamental knowledge of the assumptions, environmental considerations and techniques underlying the collection and reporting of financial information by entities in other countries. *Prerequisite: Master of Science student or permission of instructor.*

ACTG 640. Accounting Information Technology and Research. *3 credits.*
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. This course also provides development of personal research skills needed by professional accountants to stay current with ever-changing technology. *Prerequisite: Master of Science student or permission of the instructor.*

ACTG 645. Advanced Accounting and Reporting. *1-3 credits.*
Focuses on the development and use of financial information as it relates to business combinations, intercompany transactions and statements denominated in foreign currencies. *Prerequisite: Master of Science student or permission of the instructor.*

ACTG 651. Fraud Detection and Prevention. *1-3 credits.*
Covers the principles and methodology of fraud detection and prevention. Specifically addresses consumer fraud, management fraud and employee fraud. Emphasizes prevention through internal controls as well as evidence gathering techniques. *Prerequisite: Master of Science student or permission of the instructor.*

ACTG 652. Operational Audit. *1-3 credits.*
A study of the basic principles and techniques of operational auditing. Covers organizing and conducting operational audit engagements. Also addresses regulatory compliance issues. *Prerequisite: Master of Science student or permission of the instructor.*

ACTG 671/MBA 653. Business Law. *3 credits.*
A study of the principles of the law of contracts, agency, sales, commercial paper and business organizations. This course emphasizes the effect of such laws on business operations.

ACTG 675. Accounting Theory. *3 credits.*
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 MSA program. Prerequisite: Master of Science student or permission of the instructor.

ACTG 676. Seminar in Cost Accounting. *3 credits.*
This course teaches students to apply analytic reasoning and formal models to selected cost problems. *Prerequisite: Master of Science student or permission of the instructor.*

ACTG 677. Advanced Assurance Theory and Practice. *3 credits.*
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. *Prerequisite: Master of Science student or permission of the instructor.*

ACTG 678. Governmental Accounting and Reporting. *1-3 credits.*
Study of the current theory and practice of budgeting, accounting, reporting, and auditing of governmental and not-for-profit organizations. *Prerequisite: Master of Science student or permission of the instructor.*

ACTG 680. Directed Readings. *1-3 credits.*
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. *1-3 credits.*
Opportunity for directed research in areas of special interest. *Prerequisites: Permission of instructor and program director.*

ACTG 690. Information Security and Control. *3 credits.*
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 credits.*
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 investigative tools such as public records search, continuous monitoring, and auditing and link analysis software. *Prerequisite: Master of Science student or permission of the instructor.*

ACTG 693. Applied Theory and Corporate Reporting. *3 credits.*
Study and evaluation of selected areas of financial accounting theory and practice. This course emphasizes financial reporting and disclosure. *Prerequisite: Master of Science student or permission of the instructor.*

ACTG 695. Seminar in Accounting. *1-3 credits.*
Study of selected areas in accounting theory, practice and methodology. *Prerequisite: Master of Science student or permission of the instructor.*

ACTG 696. Tax Compliance. *1-3 credits.*
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*

ACTG 698. Comprehensive Continuance. *1 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

ACTG 699. Thesis Continuance. *2 credits.*
Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

ACTG 700. Thesis Research. *6 credits.*
This course is graded on a satisfactory/unsatisfactory/incomplete (S/U/I) basis. *Prerequisite: Permission of Master of Science program director.*

Art, Design and Art History

(540) 568-6216 www.jmu.edu/art

Director

Dr. Katherine Schwartz

Graduate Program Directors

Dr. Cole Welter, Studio Art

Dr. Karin Tollefson-Hall, Art Education

Professors

C. Diop, D. Ehrenpreis, L. Halpern, J. Ott, K. Schwartz, M. Shanahan, K. Szmagaj, C. Welter, W. Wightman, S. Zurbrigg

Associate Professors

A. Adesanya, S. Brooks, S. Choi, G. Freeburg, L. Katzman, M. Rooker, R. Silberman, G. Stewart, R. Tomhave, A. Taylor, L. Tubach

Assistant Professors

K. Stevens, K. Tollefson-Hall

Application and Portfolio Deadlines

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

- Fall Semester: January 16, 2015

M.A. in Art Education

- Summer Semester: Rolling admission

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

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.

Master of Fine Arts

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 (www.jmu.edu/grad/prospective), 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 Master of Fine Arts degree in studio art is awarded for a high level of professional competence. The student will select an emphasis from the following studio areas: ceramics, intermedia, metals, painting and drawing, photography, or sculpture.

The minimum requirement for the Master of Fine Arts degree in studio art is 60 hours of graduate credit including 39 credit hours of studio art, 12-18 of which must be in the area of emphasis (ceramics, intermedia, metals, painting and drawing, photography or sculpture), 12 in Graduate Studio, and six in

Thesis Research; 12 credit hours in art history, with a minimum of three in ARTH 572 (Modern Art Since 1945), and three credits of non-Western recommended; and three credit hours in Contemporary Art Theory.

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 bound 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

Minimum Requirements	Credit Hours
Studio (12-18 credit-hour minimum within a concentration)	39
Art History (including 3 credits in ARTH 572 (Modern Art Since 1945)	12
and three credits of non-Western recommended)	
ART 593. Contemporary Art Theory	3
Electives (art or non-art)	6
	60

Master of Arts Degrees

The Master of Arts in art history, art education or studio art requires a minimum of 30 credit hours. In addition to the general admission requirements, each area of study has further requirements.

Master of Arts in Art History

Not accepting students for the academic year 2014-2015.

Mission

The Master of Arts in art history is designed for those who wish to prepare for a doctoral program of study or seek entry level positions in museums, galleries, arts organizations, art-related government agencies and businesses. It also provides advanced art historical study for Virginia teachers, or those who are intending to teach in public schools or other educational institutions.

Goals

- To provide training in critical thinking and methodologies.
- To encourage in-depth study of a particular cultural/historical area.
- To provide students with research and writing skills for advanced graduate study.
- To promote general scholarly inquiry in art history and an appreciation of the interaction of culture and art.

Application Requirements

In addition to the requirements of The Graduate School (www.jmu.edu/grad/prospective), 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 12 hours of art history, including the six hours of the survey of Western art. To apply for admission, candidates must submit:

- Brief statement of purpose
- Formal writing sample of approximately 10 to 20 pages that demonstrates the applicant's analytical abilities and writing skills
- Three letters of recommendation
- Any additional materials that demonstrate the applicant's preparation and potential for graduate study
- 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.

Program Requirements

The program includes 18 hours of art history, six hours of electives and six hours of internships or directed study. At least half of these credits must be in courses designated exclusively for graduate students. Students must also successfully complete a language exam demonstrating reading proficiency in either German or French. Students may petition to be examined in another language if it is directly relevant to their course of study.

Master of Arts in Art History Requirements

Minimum Requirements	Credit Hours
Art History	18
Internship or directed study	6
Electives	6
	30

Master of Arts in Art Education

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 (www.jmu.edu/grad/prospective), 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.

Program Requirements

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

Master of Arts in Art Education Requirements

Minimum Requirements	Credit Hours
Art Education	9
Art History	3
Art Criticism	3
Thesis	6
Education/Art Education electives	9
	30

Master of Arts in Studio Art

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 (www.jmu.edu/grad/prospective), 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

Minimum Requirements	Credit Hours
Studio	15
ART 593. Contemporary Art Theory	3
ARTH 572. Modern Art Since 1945	3
Art history elective	3
Electives	6
	30

Courses

Art Education Courses

ARED 518. Contemporary Issues in Art Education
ARED 590. Topics in Art Education
ARED 610. Studio Experiences in the Schools
ARED 682. Curriculum and Research
ARED 683. Criticism of Art

Art History Courses

ARTH 508. Museums: Histories and Controversies
ARTH 519. Topics in African Art
ARTH 530. Far Eastern Art
ARTH 544. Gothic and Gothic Revival Architecture
ARTH 548. Studies in Leonardo and Michelangelo
ARTH 549. Topics in Renaissance Art: Early Modern Women Artists
ARTH 559. Topics in Seventeenth and Eighteenth Century Art
ARTH 569. Topics in Nineteenth Century Art
ARTH 570. Modern Art from 1900-1945
ARTH 572. Modern Art Since 1945
ARTH 574. New Media and Contemporary Art
ARTH 579. Topics in Twentieth Century Art
ARTH 584. Art of the Americas
ARTH 586. Monticello
ARTH 589. Topics in American Art History
ARTH 590. Topics in Art and Art History
ARTH 620. Seminar in Non-Western Art
ARTH 640. Seminar in Italian Renaissance Art
ARTH 660. Seminar in Nineteenth Century Art
ARTH 670. Contemporary Visual Culture and Critical Theory
ARTH 678. Seminar in American Art

Art Theory and Criticism Courses

ART 593. Contemporary Art Theory
ART/ARTH 683. Criticism of Art

Studio Art Courses

ART 560. Advanced Photography: Alternative Processes
ART 562. Advanced Photography
ART 564. Advanced Photography: The Photograph as Document
ART 568. Advanced Photography: Screen-Based Photo/Video
ART 590. Topics in Art
ART 600. Graduate Studio
ART 610. Directed Study: Intermedia
ART 620. Directed Study: Ceramics
ART 630. Directed Study: Fiber Arts
ART 640. Directed Study: Metals
ART 650. Directed Study: Painting
ART 660. Directed Study: Photography
ART 670. Directed Study: Printmaking
ART 680. Directed Study: Sculpture

Directed Study Courses

ART/ARTH 595. Internship in Art or Art History
ART/ARTH 690. Reading and Research
ART/ARTH 698. Comprehensive Continuance
ART/ARTH 700. Thesis
ARED 700. Thesis

Course Offerings

Art Education

ARED 518. Contemporary Issues in Art Education. *3 credits.*
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 credits.*
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 credits each.*
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. Curriculum and Research. *3 credits.*
A review of curriculum development and research in art education. The class will include assignments, readings and discussions of practical applications by art teachers. Curriculum models and sample research proposals will be developed by the students. *Prerequisite: Art teaching license.*

ARED 683. Criticism of Art. *3 credits.*
An overview of major art theories, both as philosophy and style analysis, for the purpose of investigating the functions and practice of art criticism. *Prerequisites: Admission into a School Of Art and Art History graduate program.*

ARED 700. Thesis Research. *1-6 credits.*
This course is graded on a satisfactory/unsatisfactory (S/U) basis.

Art

ART 501. Workshop in Art. *1-3 credits. (May be repeated to 6 credits.)*
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. *3 credits.*
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 credits.*
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 Document. *3 credits.*
An exploration of technical, conceptual, and theoretical approaches to making documentary-based photographic work using film, digital or video cameras.

ART 568. Advanced Photography: Screen-Based Photo/Video. *3 credits.*
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 credits.*
Study of selected topics in art and art history. May be repeated when course content changes. See MyMadison for current topics. *Prerequisites: Admission into a School of Art, Design and Art History graduate program and permission of instructor.*

ART 593. Contemporary Art Theory. *3 credits.*
An interdisciplinary course that promotes an intensive exploration of media and content through individual critiques and directed research. The format may include group critiques, projects, and readings. *Prerequisite: Admission into a School of Art, Design and Art History graduate program.*

ART 595. Internship in Art. *1-6 credits.*
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 Studio. *3 credits. (May be repeated or taken concurrently.)*
An interdisciplinary course that promotes an intensive exploration of media and content through individual critiques and directed research. The format may include group critiques, projects and readings. *Prerequisite: Admission into a School of Art, Design and Art History graduate program.*

ART 610. Directed Study: Intermedia. *3 credits. (May be repeated.)*
Independent research under faculty supervision with an emphasis on individual artistic development. Allows students to experiment in a variety of studio-based approaches. *Prerequisite: Admission into a School of Art, Design and Art History graduate program.*

ART 620. Directed Study: Ceramics. *3 credits. (May be repeated.)*
Independent research under faculty supervision with an emphasis on individual artistic development. Studio projects in the techniques and processes of ceramics, with emphasis on quality as evidenced by technical and formal consideration. *Prerequisite: Nine hours undergraduate ceramics or permission of instructor.*

ART 630. Directed Study: Fiber Arts. *3 credits. (May be repeated.)*
Independent research under faculty supervision with an emphasis on individual artistic development. Fiber arts may include tapestry, weaving, papermaking and surface design. Emphasis will be placed on creative development of techniques and individual expression. *Prerequisite: Nine hours undergraduate fiber arts or permission of instructor.*

ART 640. Directed Study: Metals. *3 credits. (May be repeated.)*
Independent research under faculty supervision with an emphasis on individual artistic development, craftsmanship and metalworking techniques. *Prerequisite: Nine hours undergraduate metals or permission of instructor.*

ART 650. Directed Study: Painting and Drawing. *3 credits. (May be repeated.)*
Independent research under faculty supervision with an emphasis on individual artistic development. The student may choose from a wide variety of media. *Prerequisite: Nine hours undergraduate painting and drawing or permission of instructor.*

ART 660. Directed Study: Photography. *3 credits. (May be repeated.)*
Independent research under faculty supervision that allows students to experiment in a variety of photographic processes including digital, traditional, and alternative process photography, photographic mixed media, lens-less photography, and lens-based media such as video. Individual artistic development is emphasized. *Prerequisite: Nine hours undergraduate photography or permission of instructor.*

ART 670. Directed Study: Printmaking. *3 credits. (May be repeated.)*
Independent research under faculty supervision in printmaking and related digital or photographic processes. Emphasis will be placed on creative development and technical expertise. *Prerequisite: Nine hours undergraduate printmaking or permission of instructor.*

ART 680. Directed Study: Sculpture. *3 credits. (May be repeated.)*
Independent research under faculty supervision with an emphasis on individual artistic development and its relationship to recent developments in contemporary art. A board range of materials and processes are available for student investigation: metal fabrication, woodworking, casting methods, performance, and video, among others. *Prerequisite: Nine hours undergraduate sculpture or permission of instructor.*

ART 683. Criticism of Art. *3 credits.*
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.*

ART 690. Reading and Research. *1-3 credits.*
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. *Prerequisites: Two graduate-level art history courses and permission of instructor.*

ART 698. Comprehensive Continuance. *1 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

ART 699. Thesis Continuance. *2 credits.*
Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

ART 700. Thesis Research. *3 credits, repeatable.*
This course is graded on a satisfactory/unsatisfactory (S/U) basis.

Art History

ARTH 506. Monticello. *3 credits.*
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 credits.*
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 credits.*
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 539. Topics in Medieval Art. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 549. Topics in Renaissance Art. *3 credits.*
Topics in Renaissance art may include studies of major Italian or Northern Renaissance artists, the development of linear perspective, the Renaissance tomb chapel or art and politics of the Protestant Reformation. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 559. Topics in Seventeenth and Eighteenth Century Art. *3 credits.*
Topics in 17th- and 18th-century art may include studies of particular artists such as Rembrandt, Caravaggio or Watteau, studies of particular styles such as the Rococo, or

thematic studies such as the history of garden design or the development of art theory. Emphasis is on analysis of primary and secondary sources. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 566. Art and Nationalism. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 Twentieth Century Art. *3 credits.*
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 credits.*
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 588. African American Art. *3 credits.*
This course examines visual arts produced by people of African descent in the United States. Course themes include debates about the relationship between racial identity and artistic production; the complex interchange between African-American art and the cultural traditions of Africa and Europe; black artists' engagement with popular representations of African Americans; and the intersection of race with class, gender, and sexuality. Substantial research paper required. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 589. Topics in American Art History. *3 credits.*
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 credits.*
Study of selected topics in art and art history. May be repeated when course content changes. See MyMadison for current topics. *Prerequisites: Admission into a School of Art, Design and Art History graduate program and permission of instructor.*

ARTH 595. Internship in Art History. *1-6 credits.*
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 620. Seminar in Non-Western Art. *3 credits.*
A seminar addressing the representation of "others" in scholarship and museum exhibition strategies. Issues of identity, of the construction of knowledge, of audience participation and of differing ways of seeing and knowing will be explored. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 640. Seminar in Italian Renaissance Art. *3 credits.*
This course will focus on various topics in Italian art from 1300-1550, including interdisciplinary themes such as art in the age of Dante or in-depth contextual studies of Italian Renaissance sculpture or painting. *Prerequisite: Admission into a School of Art, Design and Art History graduate program or permission of instructor.*

ARTH 660. Seminar in Nineteenth Century Art. *3 credits.*
This course will focus on various topics in Nineteenth century art from 1780-1900, including interdisciplinary themes such as art in an age of Revolution, or in-depth contextual studies of specific movements such as Romanticism. *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 credits.*
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 credits.*
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 690. Reading and Research. *1-3 credits.*
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.
Prerequisites: Two graduate-level art history courses and permission of instructor.

ARTH 698. Comprehensive Continuance. *1 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

ARTH 699. Thesis Continuance. *2 credits.*
Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

ARTH 700. Thesis Research. *3 credits, repeatable.*
This course is graded on a satisfactory/unsatisfactory (S/U) basis.

Assessment and Measurement Doctoral Program

(540) 568-7132 www.jmu.edu/assessment/ graduate/PhdOverview.htm

Graduate Program Director

Dr. Deborah Bandalos

Application Date

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

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.
- 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.
- Personal interview.

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 both 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 and measurement 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 and measurement.

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, empirical analysis of aggregate data, appropriate use of assessment results, and effective communication of assessment to a variety of audiences. Moreover, with the extensive background in measurement theory provided, the graduates of this Ph.D. program are trained as experts in assessment, 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 and measurement in higher education, students can apply many of the skills and knowledge gained in the program to assessment and measurement in K-12 education as well as to the health care and business sectors. Students are not trained to perform psychological assessment of individuals for clinical diagnostic or therapeutic purposes, as training in this concentration revolves around the design and improvement of methods to measure program effectiveness.

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 selected, major pedagogical foundations of psychology, assessment 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 complete course work in the following areas:

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

Required Courses	Credit Hours
PSYC 604. Computer-Assisted Data Management	3
PSYC 608. Multivariate Statistics	3
PSYC 770. Assessment and Public Policy	3
PSYC 812. Assessment Methods and Instrument Design	3
PSYC 814. Performance Assessment	3
PSYC 816. Classical Test Theory and Generalizability Theory	3
PSYC 825. Doctoral Seminar (3 occasions; 2 credit hours per offering)	6
PSYC 855. Assessment and Consultation Practice	3
Two of the following three courses:	6
PSYC 830. Structural Equation Modeling	
PSYC 832. Item Response Theory	
PSYC 836. Hierarchical Linear Modeling	
Approved Electives	12
Required Research Experiences:	
PSYC 879. Doctoral Assessment Practicum	3
PSYC 900. Doctoral Dissertation	9
	57

Higher Education Assessment Specialist Graduate Certificate Program

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	Credit Hours
PSYC 501. Public Policy Related to Assessment in Higher Education	3
PSYC 501. Foundations of Measurement and Assessment Design	3
PSYC 601. Instrument Design for Higher Education Assessment	3
PSYC 601. Assessment Consultation in Higher Education	3
	12

Biology

(540) 568-3508 or (540) 568-6930 www.jmu.edu/biology/gradprogram.shtml

Academic Unit Head

Dr. Joanna Mott

Graduate Program Director

Dr. Roshna Wunderlich

Professors

D. Brakke, J. Dilts, M. Gabriele, R. Harris, C. Hurney, C. Lantz, S. Leslie, C. McMullen, J. Monroe, J. Mott, M. Renfroe, C. Rose, B. Wiggins, G. Wyngaard, R. Wunderlich

Associate Professors

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

Assistant Professors

I. Cooper, R. Enke, P. Ludwig, C. May, J. Newnam-Baicy, K. Roth, P. Vasudevan

Instructors

E. Doyle, O. Hyman, 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.

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. Application deadline is February 1.

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
- Microbiology
- Neurobiology
- Plant Biology

More information regarding faculty research can be found Department of Biology website at www.jmu.edu/biology/gradprogram.shtml.

Course Requirements

Minimum Requirements	Credit Hours
BIO 700. Thesis	6
Electives (15 credits must be at the 600- or 700-level, including BIO 700)	24
	30

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 (2 credits) and BIO 601, Mentored Teaching (1 credit).

BIO 500, Effective Scientific Communication (2 credits), is 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 departmental seminars while in residence.

Course Offerings

Biology

For a student to enroll in any biology graduate course (except BIO 501), 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.

BIO 500. Effective Scientific Communication. *2 credits.*
Students will develop skills in effective oral and written communications in the biological sciences. Emphasis will be placed on how to prepare an effective lecture or research seminar, effective use of presentation technologies and effective scientific writing.

BIO 501. Workshops in Biology. *1-3 credits.*
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 504. Evolution. *3 credits.*
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. *Credit may not be earned in both BIO 404 and BIO 504.*

BIO 513. Human Gross Anatomy with Clinical Applications (4, 8). *6 credits.*
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 credits.*
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. *4 credits.*
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. *3 credits.*
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: Successful completion of all previous courses in the physician assistant concentration or permission of the program director.*

BIO 520. Medical Parasitology. *3 credits.*
The study and medical implications of parasites that infect humans. Class activities will emphasis 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.

BIO 526. Graduate Topics in Biology. *3-4 credits.*
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 (2, 4). *4 credits.*
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.

BIO 540. Functional Neuroscience for Occupational Therapists. *3 credits.*
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. *Prerequisites: 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 credits.*
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: A course in microbiology or genetics or consent of the instructor. Credit may not be earned in both BIO 444 and BIO 544.*

BIO 547. Evolution and Ecology of Infectious Disease. *3 credits.*
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.

BIO 548. Medical Microbiology. *3 credits.*
This class focuses on microorganisms of medical importance, mainly bacteria and viruses. Lecture follows an organism-by-organism approach. Key topics for each organism include general cell structure, unique structures/functions, epidemiology of the disease that the organism causes, mechanisms of pathogenesis, isolation and identification of the organism, and treatment options. *Prerequisite: Undergraduate general microbiology course or permission of instructor.*

BIO 549. Contemporary Developmental Biology. *3 credits.*
Discussion-based course on topical issues in developmental biology and how they impact animal evolution, bioethics, human identity and environmental science. A research paper and class presentation is required. *Credit may not be earned in both BIO 550 and BIO 549.*

BIO 550. Neurobiology (3,3). *4 credits.*
Molecular, cellular and network mechanisms underlying behavior will be studied using problem-solving, discussion, lecture and critical reading of the primary literature. Similarities and differences between nervous systems and computers will be explored. Laboratories will utilize contemporary electrophysiology and computer simulation to examine the neurobiology of simple animal model systems. *Credit may not be earned in both BIO 450 and BIO 550.*

BIO 552. Population Biology (2,4). *4 credits.*
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. *Credit may not be earned in both BIO 452 and BIO 552.*

BIO 553. Microbial Ecology and Evolution (2,4). *3 credits.*
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. *Prerequisites: Introductory ecology and microbiology. Credit may not be earned in both BIO 453 and BIO 553.*

BIO 554. Biometrics. *4 credits.*
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 (3,3). *4 credits.*
The physiology of plant cells and organisms emphasizing biophysical and biochemical aspects of plant function including water relations, mineral nutrition, transport phenomena and metabolism. *Prerequisites: General botany and organic chemistry. Credit may not be earned in both BIO 455 and BIO 555.*

BIO 557. Biological Applications of Geographic Information Systems (2, 4). *4 credits.*
This course will explore the various ways 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.*

BIO 559. Aquatic Ecology (2,4). *4 credits.*
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. *Credit may not be earned in both BIO 459 and BIO 559.*

BIO 560. Plant Cell and Tissue Culture (2,4). *4 credits.*
Theory and practice of growing isolated plant cells, tissues and organs. Independent research project and class seminar expected. *Prerequisites: General botany and chemistry. Credit may not be earned in both BIO 460 and BIO 560.*

BIO 565. Environmental Toxicology (3,3). *4 credits.*
The study of types, sources and biological effects of environmental pollutants. Class activities will include discussions of the biological effects of a broad range of pollutants. Labs will focus on the use of simulation models, geographic information systems and other software currently used in environmental toxicology for the analysis of environmental data. A presentation/research paper involving advanced applications is required. *Prerequisite: BIO 224 or equivalent. Credit may not be earned in both BIO 465 and BIO 565.*

BIO 566. Toxicology Seminar. *3 credits.*
Advanced readings and discussions of the primary scientific literature with a focus on the biological effects of toxins at the genetic, cellular, physiological, and ecological level. An independent literature research project is required. *Prerequisite: BIO 224 or equivalent. Credit may not be earned in both BIO 466 and BIO 566.*

BIO 570. Morphology of Non-Vascular Plants. *3 credits.*
Comparative morphology, ecology and taxonomy of representative algae, fungi and bryophytes.

BIO 575. Advanced Cell and Molecular Biology. *3 credits.*
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.*

BIO 577. The Genetics of Cancer. *3 credits.*
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.

BIO 580. Advanced Molecular Biology (2,4.) *4 credits.*
Cellular constituents and genetics are emphasized at the molecular level. *Credit may not be earned in both BIO 480 and 580.*

BIO 582. Human Histology (3, 3). *4 credits.*
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.*

BIO 583. Bioinformatics (3, 3). *4 credits.*
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.

BIO 584. Comparative Endocrinology. *3 credits.*
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 (2,4). *4 credits.*
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. *Prerequisites: General botany and cell biology or equivalents. Credit may not be earned in both BIO 486 and BIO 586.*

BIO 590. Biomechanics (3,3). *4 credits.*
A study of the interactions of organisms with their physical environment. Concepts from fluid and solid mechanics are applied to biological form and function. Independent research is required. *Prerequisite: BIO 220 or permission of the instructor. Credit may not be earned in both BIO 490 and BIO 590.*

BIO 591. Mechanics of Animal Movement. *4 credits.*
The interactions of organisms with their physical environment. Concepts from fluid and solid mechanics are applied to biological form and function.

BIO 595. Topics in Integrative Biology. *1-3 credits.*
This course will examine the interrelationships of various biological topics with related scientific and mathematical disciplines that are not offered by the biology department. A seminar/research project involving advanced applications is required. Course may be repeated as topics change. *Prerequisite: Permission of the instructor.*

BIO 600. Effective Teaching I. *2 credits.*
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 credit.*
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 603. Scientific Presentations. *1 credit.*
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 615. Managing Anatomy and Physiology Laboratories. *2 credits.*
This course will teach students how to manage an anatomy and physiology laboratory. Course topics will include lab safety, course budgets, the acquisition of supplies, facility layout and design, cadaver maintenance, and the use and maintenance of equipment and inventory control.

BIO 630. Advanced Graduate Topics in Cell, Molecular and Developmental Biology. *1-3 credits.*
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. *1-3 credits.*
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. *1-6 credits.*
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 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed. This course is graded on the satisfactory/unsatisfactory (S/U) basis. Hours do not apply toward 30 hours required for graduation.

BIO 699. Thesis Continuance. *2 credits.*
Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed. This course is graded on the satisfactory/unsatisfactory (S/U) basis. Hours do not apply toward 30 hours required for graduation.

BIO 700. Thesis Research. *1-6 credits.*
Thesis research to be directed by the Graduate Advisory Committee. This course is graded on a satisfactory/unsatisfactory (S/U) basis. *Prerequisites: Unconditional admission status in the graduate program and completion of an approved thesis research proposal.*

Business Administration

(540) 568-3058 www.jmu.edu/cob/mba

Graduate Program Director
Dr. Michael E. Busing

Accounting Program

Professor
D. Fordham

Assistant Professor
S. Cereola

Economics Program

Professor
W. Wood

Assistant Professor
W. Grant

Finance and Business Law Program

Professors
S. B. Marshall, D. Thomas

Associate Professors
Q. Liu, E. Semaan

Computer Information Systems and Business Analytics Program

Professors
M. Busing, D. Lending, I. Markham

Associate Professors
R. Pal, H. Reif

Assistant Professor
C. Guo

Management Program

Professors
D. Gallagher, R. Kolodinsky, M. Rutherford

Associate Professors
E. Stark, M. Pattie

Assistant Professors
F. Mousa, W. Wales

Marketing Program

Professor
T. Clarke

Associate Professor
D. Eric Boyd

Master of Business Administration Program

Adjunct Graduate Faculty
H. Bromley, H. Fielden, M. House

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.) or a CPA. 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 an M.B.A. degree.

To apply, students should complete the online application and submit the application fee at 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 online 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 June 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 2012.

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

The Innovation MBA program is offered in Harrisonburg and takes two years 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 once 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.

The Information Security (Infosec) MBA program is offered in Reston, 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.

Innovation MBA Program

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 program includes the 16 courses listed below. The program includes 48 total credit hours.

Required Courses	Credit Hours
Core Curriculum (6 courses):	18
MBA 600. Leadership and Organizational Behavior	
MBA 620. Accounting for Decision Making and Control	
MBA 630. Financial Management	
MBA 642. Supply Chain Management	
MBA 644. Foundations of Marketing Management	
MBA 690. Strategic Management	
Leadership Values (2 courses):	6
MBA 667. Business Ethics and Social Responsibility	
MBA 695. Cultural Awareness Experience	
Innovation Theme	9
MBA 601. Management of Innovation and Technology	
MBA 611. Project Management	
MBA 640. Managerial Information Systems	
Electives (choose five from the following):	15
MBA 602. Management of New Product Development	
MBA 603. Integrated Marketing Communications	
MBA 604. The Emergence of Modern Economic Growth	
MBA 605. Entrepreneurship and Venture Creation	
MBA 606. Managing in an Innovation-driven Global Environment	
MBA 607. Leadership Communication Skills for Business	
MBA 612. Managing Complex Projects	
MBA 650. Managing Human Resources for Innovation	
MBA 653. Business Law	
MBA 654. Investment Analysis	
MBA 655. Marketing Research for Decision Making	
MBA 656. Business Process Management	
MBA 657. Strategic Information Management	
MBA 658. Financial Risk Analysis and Management	
MBA 664. Negotiations and Conflict Management	
MBA 665. Internet Marketing	
MBA 668. Environmental Management and Sustainability	
MBA 678. Special Topics	
	48

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.

Recommended Sequence

Courses are taken in the following sequence:

Year One

First Eight-Week Session

MBA 620. Accounting for Decision Making and Control

MBA 640. Managerial Information Systems

Second Eight-Week Session

MBA 611. Project Management

MBA 630. Financial Management

Third Eight-Week Session

MBA 642. Operations and Supply Chain Management

MBA 644. Foundations of Marketing Management

Fourth Eight-Week Session

Two electives

Year Two

First Eight-Week Session

MBA 600. Leadership and Organizational Behavior

MBA 601. Management of Innovation and Technology

Second Eight-Week Session

MBA 667. Business Ethics and Social Responsibility

MBA 690. Strategic Management

Third Eight-Week Session

Two electives

Fourth Eight-Week Session

One elective

MBA 695. Cultural Awareness Experience

Required Courses

Required courses taken during the same session will be integrated to the degree and by the method determined appropriate by the instructors. This will improve students' understanding of how different functional areas fit together.

MBA 695, Cultural Awareness Experience, is taken outside of the eight-week session format during May-June of the student's final year. This course includes a 10-14 day international trip, plus the preparation for the trip and a post-trip analysis. The location of these trips will vary yearly and will include destinations such as China, India or Europe. The international trip will include numerous visits to both business and cultural sites.

MBA 690, Strategic Management, is the capstone course in the M.B.A. program and replaces the comprehensive examination requirement. A minimum grade of "B" or better must be attained to pass MBA 690.

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.
- Leadership development program: A program which will include periodic discussions with an assigned mentor.

Information Security MBA Program

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 Program 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 Reston, Va., near Dulles airport.

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

Information Security MBA Program Requirements

Minimum Requirements	Credit Hours
MBA 600. Leadership and Organizational Behavior	3
MBA 610. Quantitative Methods for Management	3
MBA 620. Accounting for Decision Making and Control	3
MBA 630. Financial Management	3
MBA 640. Management Information Systems	3
MBA 641. The Microeconomics of Business Decision-Making	3
MBA 642. Operations and Supply Chain Management	3
MBA 644. Foundations of Marketing Management	3
MBA 654. Investment Analysis	3
MBA 680. Introduction to Information Security	3
MBA 681. Managing System Networks	3
MBA 682. Managerial Computer Forensics	3

MBA 685. Information Security Ethics and Policy	3
MBA 690. Strategic Management	3
	42

MBA 690, Strategic Management, is considered the capstone course in the M.B.A. program and replaces the comprehensive examination requirement. A grade of "B" or better must be attained to pass MBA 690.

Course Offerings

Accounting

MBA 620. Accounting for Decision Making and Control. *3 credits.*
Designed to present use of accounting in business decision-making. Covers concepts and theories pertinent to the management function. *Prerequisite: One year of introductory accounting. Not available for graduate credit for Master of Science program studies.*

MBA 670. Directed Research. *1-3 credits.*
Opportunity for directed research in areas of special interest. Prerequisites: *Permission of instructor and Master of Business Administration program director.*

Business Law

MBA 653. Business Law. *3 credits.*
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 676. Directed Research. *1-3 credits.*
Opportunity for directed research in areas of special interest. *Prerequisites: Permission of instructor and Master of Business Administration program director.*

Economics

MBA 604. The Emergence of Modern Economic Growth. *3 credits.*
This course focuses on how modern economic growth emerged and sustained itself overtime. How world economies can use physical and human capital and technologies to perpetuate their economic growth and improve the standard of living for their citizen in the long-run. Various models of economic growth and empirical evidence from global economies will be discussed. Special emphasis will be placed on educating business students about the sources of and policies that promote economic growth.

MBA 641. The Microeconomics of Business Decision-Making. *3 credits.*
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 662. Macroeconomic Theory and Economic Policy. *3 credits.*
A study of macroeconomic theory and policy as they relate to unemployment, inflation and the rate of economic growth.

MBA 673. Directed Research. *1-3 credits.*
Opportunity for directed research in areas of special interest. *Prerequisites: Permission of instructor and Master of Business Administration program director.*

Finance

MBA 630. Financial Management. *3 credits.*
An in-depth examination of financial topics vital to the financial manager including financial and cash flow analysis, pro forma statement analysis, working capital, capital budgeting, valuation of financial assets, cost of capital, and risk analysis. The course emphasizes quantitative problem solving with extensive use of actual case situations. *Corequisite: MBA 620 should be taken either at the same time or prior to MBA 630.*

MBA 643. Advanced Topics and Cases in Financial Management. *3 credits.*
An in-depth examination of financial topics including financial and market efficiency, obtaining funds using debt or equity, leasing, capital structure, dividend policy, warrants, options and other derivative securities, international finance, hedging risks, mergers and acquisitions, financial distress and firm valuation. The course makes extensive use of actual case situations. *Prerequisite: MBA 630.*

MBA 654. Investment Analysis. *3 credits.*
Investment theory, development and application of analytical tools in the appraisal and selection of investments.

MBA 658. Financial Risk Analysis and Management. *3 credits.*
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 630.*

MBA 660. International Finance. *3 credits.*
Analysis of problems involving international business finance. Description of international payments system and financial institutions, and application of analytical techniques and procedures for financing investments and business activities abroad. *Prerequisite: MBA 630.*

MBA 661. Financial Management of Real Estate Investments. *3 credits.*
An in-depth examination of real estate investment and finance from an individual and institutional approach. Topics include the investment calculus, risk analysis, cost of long- and short-term capital and construction, and development financing.

MBA 671. Directed Research. *1-3 credits.*
Opportunity for directed research in areas of special interest. *Prerequisites: Permission of instructor and Master of Business Administration program director.*

International Business

MBA 606. Managing in an Innovation-driven Global Environment. *3 credits.*
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 663. International Business Development. *3 credits.*
An in-depth study of a special topic or theme in international business and/or a collection of currently breaking opportunities in the global business environment. *Prerequisite: Permission of instructor.*

Computer Information Systems and Management Science

MBA 610. Quantitative Methods for Management.*3 credits.*
This course develops topics in management science and then applies these tools to analyze and solve problems arising in business situations. Topics include forecasting, simulation, queuing theory, linear programming, integer programming, sensitivity analysis and decision analysis. *Prerequisite: MBA 502 or the equivalent.*

MBA 611. Project Management. *3 credits.*
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 612. Managing Complex Projects. *3 credits.*
This course covers advanced topics in project management. The course addresses a variety of project management issues including managing a portfolio of projects, methods for enhancing the project schedule, cost, or performance, complex project management, multi-functional and multi-organizational projects, the organizational behavior aspects leading and managing project teams, and legal aspects of project management. *Prerequisite: MBA 611.*

MBA 640. Management Information Systems. *3 credits.*
An overview of information systems theory and technology. Primary emphasis is on management's role in planning, designing, developing and using computer-based information systems in business organizations. Other topics include systems theory, computer technology, information systems for decision making and behavioral implications of management information systems.

MBA 642. Operation and Supply Chain Management. *3 credits.*
This course is the study of supply chain principles and practices, with a focus on materials and logistics management. The course investigates supply chain management for both products and services in a global economy. Particular focus is on supply chain design, which includes strategies for customer service, quality, logistics, inventory management, and integrated supply chain management.

MBA 652. Technology Enhanced Decision Making. *3 credits.*
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 656. Business Process Management. *3 credits.*
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 672. Directed Research. *1-3 credits.*
Opportunity for directed research in areas of special interest. *Prerequisites: Permission of instructor and Master of Business Administration program director.*

Management

MBA 600. Leadership and Organizational Behavior. *3 credits.*
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 credits.*
Course focuses on the management of technology, which includes technology evolution, technology transfer, R&D and technology strategy, and 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 credits.*
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 credits.*
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 607. Leadership Communication Skills for Business. *3 credits.*
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 650. Managing Human Resources. *3 credits.*
Emphasis is placed on selection interviewing, worker-managerial crisis interviewing, Equal Employment Opportunity Commission, placement procedures and assessing manager effectiveness.

MBA 664. Negotiations and Conflict Management. *3 credits.*
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. Business Ethics and Responsibility. *3 credits.*
Introduces principles of ethical thinking and applies them to situations and models for business decision-making. Focuses on corporate social responsibility and individual ethical decision making.

MBA 668. Environmental Management and Sustainability. *3 credits.*
The focus of this course is creating business value from environmental sustainability. Using environmental (green) strategies to innovate, create value and build competitive advantages. Review of environmental management and sustainability economics best practices.

MBA 674. Directed Research. *1-3 credits.*
Opportunity for directed research in areas of special interest. *Prerequisites: Permission of instructor and Master of Business Administration program director.*

MBA 690. Strategic Management. *3 credits.*
The required capstone course for all graduate business students. Emphasizes corporate governance and complex, top management level strategic thinking and decision making. Integrates all the functional areas of business while emphasizing the external environment and ethical context of management. *Prerequisite: Must be the last required course taken of the Master of Business Administration program.*

MBA 695. Cultural Awareness Experience. *3 credits.*
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.

Marketing

MBA 603. Integrated Marketing Communications. *3 credits.*
The course provides a comprehensive view of the integrated marketing communication (IMC) process. IMC is the strategic response of business and marketing communications to rapid worldwide changes in markets, demands, technology, and consumer power. IMC is a cross-functional approach that unites and expands the traditional marketing disciplines in order to create and nourish successful long-term relationships with customers and other stakeholders.

MBA 644. Foundations of Marketing Management. *3 credits.*
The course focuses on marketing planning, strategy and policy. In addition, application of analytical tools to contemporary marketing problems is a central focus.

MBA 655. Market Research for Decision-Making. *3 credits.*
The course provides MBA students with the tools to evaluate primary market research. Students will study the market research process including: defining the problem, conceptualization, research design, sources of data, questionnaire development, sampling, data collection methods, univariate and multivariate statistical analyses, and the development of a management oriented report. Students will apply the components of the market research process and conduct their own research project.

MBA 665. Internet Marketing. *3 credits.*
Studies the culture and demographics of the Internet, online business strategies, and the hardware and software tools necessary for online marketing practice. Students learn to identify relevant target segments, develop product opportunities, pricing structures and distribution channels over the Internet, and to execute marketing strategy in computer mediated environments.

MBA 675. Directed Research. *1-3 credits.*
Opportunity for directed research in areas of special interest. *Prerequisites: Permission of instructor and Master of Business Administration program director.*

Information Security

MBA 680. Introduction to Information Security. *3 credits.*
Overview of information security exploring basic concepts and developing knowledge and skills of protecting valuable information assets and systems.

MBA 681. Managing System Networks. *3 credits.*
Development of understanding and skills for managing effective security in enterprises that depend upon information infrastructures and engage in e-commerce.

MBA 682. Managerial Computer Forensics. *3 credits.*
To educate current and future managers in the roles, responsibilities, nature, structure, content, parties, networks, tools and processes involved in computer (digital) forensics.

MBA 685. Information Security Ethics and Policy. *3 credits.*
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.

Business Administration

MBA 678. Special Topics. *3 credits.*
Special topics in business administration. Content varies depending upon semester and instructor.

Combined-Integrated (C-I) Doctoral Program in Clinical and School Psychology

Department of Graduate Psychology
(540) 568-7857 www.psyc.jmu.edu/cipsyd/

Graduate Program Director
Dr. Gregg R. Henriques

Application Date

The application date for the fall semester is February 1. Programs may require a criminal history check as part of the final admissions process.

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 GRE scores (verbal, quantitative and analytic) and advanced Psychology GRE scores (previous GRE scores may be accepted).
- 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 representative work sample of current skills (e.g., test reports, counseling summaries, etc.).
- submit a current professional vitae.

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.

Mission

The mission of the C-I Doctoral Program is to produce leading professional 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	Credit Hours
PSYC 668. Couple and Family Systems	3
PSYC 826. Advanced Seminar in Developmental Psychopathology	3
PSYC 852. Advanced Consultation and Supervision	3
PSYC 864. Processes of Psychotherapy	3
PSYC 865. Integrative Psychotherapy for Adults	3
PSYC 878. Integrative Doctoral Practicum	16
One course in psychological assessment	3
One course in psychotherapeutic interventions	3
PSYC 825. Seminar in C-I Psychology	8
PSYC 881. Issues and Techniques in Research and Evaluation	3
PSYC 895. Practicum in College Teaching	2
CE 850. Predoctoral Internship	3
PSYC 900. Doctoral Dissertation	6
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Communication and Advocacy

School of Communication Studies

(540) 568-6228 http:macommstudiesjmu.com/

Academic Unit Head

Dr. Eric Fife

Graduate Program Director

Dr. Pete Bsumek

Professors

M. Alemán, E. Fife, S. Mazzarella, T. Whitfield

Associate Professors

C. Alemán, P. Bsumek, C. Hickerson, L. Nelson, S. Opt, S. Richards, D. Schill

Assistant Professors

T. Ball, A. Bodkin, M. Brigham, L. Britt, H. Carmack, M. Davis, T. Hocke, J. Rosier, C. Woo

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.
- Satisfactory test scores from the Graduate Record Examination (GRE).
- 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
- GRE Scores
- 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.

Students may apply online to The Graduate School and apply for assistantships through the process described on the graduate program website at http://macommstudiesjmu.com. 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, applied interpersonal and organizational communication 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.
- Three hours of elective course work.
- Six hours of thesis or internship credit designed to facilitate specific vocational and academic qualifications in the field.

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 depth and practicum requirements allow students to develop competencies in specific areas of advocacy studies.

Master of Arts in Communication and Advocacy Requirements

Required Courses	Credit Hours
Introduction to the Program	
SCOM 500. Introduction to Advocacy Studies	3
Theory and Applied Contexts	
Choose one of the following theory courses:	3
SCOM 540. Seminar in Communication Theory	
SCOM 541. Seminar in Rhetorical Theory and Advocacy	
SCOM 625. Interpersonal Communication as Advocacy	3
SCOM 650. Applied Organizational Communication	3
Research Methods and Tools	
SCOM 580. Seminar in Communication Research Methods	3
Choose one of the following advanced research methods courses:	3
SCOM 681. Seminar in Communication Criticism	
SCOM 683. Seminar in Quantitative Communication Research Methods	
SCOM 685. Seminar in Qualitative Research Methods	
Concentrations	
Choose one of the following concentrations:	9
Health Communication	
Environmental Communication	
Elective Requirement	
Elective	3
May be a communication studies course or approved course in a program that features advocacy related topics or that assists in the development of students'	
professional goals in a particular organizational context.	
Completion Requirements	
Choose one of the following.	6
SCOM 700. Communication Studies Thesis	
SCOM 701. Communication Studies Internship	
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Concentrations

As part of their requirements for an M.A. in Communication and Advocacy, students will select a concentrated area of study: Health Communication or Environmental Communication. In each concentration, research, theory and practical application are combined to help students develop communication strategies and research designs associated with positive health outcomes and successful negotiation of the health care system, as well as the development and promotion of local to global action steps with the potential to positively shape environmental quality of life levels across local, regional, national and international living spaces. Graduate students in health and environmental communication advocacy will develop and refine knowledge and skills essential to becoming more effective health and environmental communication advocates, health and environmental communication research investigators, and health and environmental communication research consumers.

Health Communication

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.

Health Communication Concentration Requirements

Required Courses	Credit Hours
SCOM 501. Foundations in Health Communication Advocacy & Research	3
SCOM 670. Health Campaign Advocacy & Social Influence: Campaign Development and Delivery	3
SCOM 671. Intercultural Health Communication Advocacy	3
	9

Environmental Communication

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.

Environmental Communication Requirements

Required Courses	Credit Hours
SCOM 551. Fundamentals in Environmental Communication and Advocacy	3
SCOM 651. Environmental Decision Making: Conflict, Advocacy and Participatory Processes	3
SCOM 654. Environmental Campaign Advocacy and Social Influence	3
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Course Offerings

Communication Studies

SCOM 500. Introduction to Advocacy Studies. *3 credits.*
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 501. Foundations in Health Communication Advocacy & Research. *3 credits.*
This course overviews health and environmental communication. It surveys health/risk communication perspectives, as well as environmental quality and public health issues. Students will develop an in-depth knowledge of these perspectives to grasp how extant theory informs health and environmental communication research and advocacy practices. Students will evaluate this body of research, with far-reaching implications for quality of life levels, especially among disenfranchised individuals.

SCOM 502. Introduction to Teaching Fundamental Communication. *0 credits.*
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 each semester only for students holding graduate assistantships.

SCOM 540. Seminar in Communication Theory. *3 credits.*
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 and Advocacy. *3 credits.*
A survey of classical, modern and contemporary theories of rhetoric. The course examines the historical circumstances, situated practices of advocacy, and mediums of delivery that have influenced differing iterations of rhetorical theory; its influence upon historical and contemporary practices of advocacy; and the invention, arrangement and styles of theoretical disputes related to rhetorical theory.

SCOM 551. Fundamentals in Environmental Communication and Advocacy. *3 credits.*
This course traces the history of environmental communication. It examines the symbolic and cultural dimensions of conceptions of nature and environment; surveys topics, theories and methods associated with the study of environmental communication; and explores relationships between environmental and health communication. Students will understand and appreciate how extant theory informs health and environmental communication research, community-based interventions, and advocacy practices.

SCOM 558. Communication, Advocacy, and Health Organizations. *3 credits.*
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 572. Mutual Advocacy in Doctor-Patient Relationships. *3 credits.*
This course explores doctor-patient communication from patient-provider perspectives. Advocacy can play a leading role for providers and patients with implications for decision-making, mutual support, and trust. Students will examine doctor-patient interaction, medical decision-making, key impacts of managed care, salient factors that shape patient outcomes, and selected theoretical frameworks for explaining doctor-patient communication.

SCOM 573. Communication, Aging, and Health Care Advocacy. *3 credits.*
Critical overview of the theoretical approaches to communication and aging as applied to advocacy in health care contexts. Explores communication competency in exchanges between health care providers and older adults, changing physiology and quality of communication, stereotypes and ageism in everyday communication practices, challenges of dementia, family communication and social support, and the use of telemedicine for health care delivery.

SCOM 580. Seminar in Communication Research Methods. *3 credits.*
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 610. Strategic Communication. *3 credits.*
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 620. Advocacy Management Communication. *3 credits.*
This seminar examines principles, methods, theory, 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 625. Interpersonal Communication as Advocacy. *3 credits.*
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 630. Culture and Conflict Resolution. *3 credits.*
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 647. Health Advocacy and Multicultural Communication in Aging Populations. *3 credits.*
Examines the cultural bases of effective health related messages. Investigates cultural models of disease, aging, and health and well-being. Critical examination of current approaches to health promotion and intervention and their application in multicultural communities. Uses a case study approach to understanding cultural appropriate health related messages.

SCOM 648. Race, Class and Gender in Communication in Later Life. *3 credits.*
A social justice approach to the study of communication and aging examines socio-structural conditions that impact communication and well-being in later life. Includes the feminization of poverty, cultural conditions of environmental health risks/burdens, and communication of racism/classism/sexism in health care contexts with aging populations. Focuses on practices of advocacy in health care delivery and intervention to promote access to education and resources to underserved communities.

SCOM 650. Applied Organizational Communication. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 670. Health Campaign Advocacy & Social Influence: Campaign Development and Delivery. *3 credits.*
This course systematically explores and elaborates key concepts, principles, and underlying theories pertinent to public health and environmental 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 credits.*
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 672. Catastrophic Illness Advocacy. *3 credits.*
This course examines communication across catastrophic health conditions – Alzheimer's, cancer, AIDS/HIV, and diabetes – as well as social support provision and reception. This course is designed to help students better grasp the nature of such catastrophic conditions, develop and assess social support messages, as well as to facilitate family empowerment and sound decision making in end-of-life contexts.

SCOM 680. Readings and Research. *3 credits.*
Readings and research in the discipline.

SCOM 681. Seminar in Communication Criticism. *3 credits.*
A graduate seminar in the theories and practices of communication 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. P*rerequisite: SCOM 580.*

SCOM 683. Seminar in Quantitative Communication Research Methods. *3 credits.*
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 credits.*
Survey of qualitative communication research methods. Overviews the paradigms in qualitative research, research planning and conceptualization, participant observation, in-depth interviews, and 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.*

SCOM 700. Communication Studies Thesis. *3-6 credits.*
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. *Prerequisite: Approval of student's graduate advisory committee and graduate advisor.*

SCOM 701. Communication Studies Internship. *3-6 credits.*
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) basis. *Prerequisite: permission of the instructor and the internship supervisor.*

Communication Sciences and Disorders

Department of Communication Sciences and Disorders
(540) 568-6440 www.csd.jmu.edu

Academic Unit Head
Dr. Cynthia R. O'Donoghue

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

Graduate Program Director
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)

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

JMU Coordinator
Andrea Weaver
M.S., CCC-SLP DLVE-SLP-Distance Learning in VA Educating Speech Language Pathologists

Professors
R. DePaolis, L. Gray, C. Ludlow, C. O'Donoghue, V. Reed, B. Ryals, J. Spindel

Associate Professor
C. Dudding, A. Rout

Assistant Professors
C. Clinard, C. Jacobson, K. Johnson, S. Pavelko

Clinical Instructors
S. Ingram, M. Powell

Admission Criteria

Specific admission requirements 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 who have not met the undergraduate prerequisite course work for the clinical preparation programs in audiology and speech-language pathology may apply to the clinical graduate programs (Master of Sciences in Speech-Language Pathology or Doctor of Audiology) as a provisional student. Once the prerequisite course work has been completed at a satisfactory level, the student is shifted from provisional to either conditional or unconditional status.

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. Through its applied laboratory the department seeks to provide outreach services to the region as part of the clinical teaching component of its mission and to provide 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 Applied Laboratory

The JMU Applied Laboratory, 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 clinical teaching laboratory 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.

Doctor of Philosophy (Ph.D.) in Communication Sciences and Disorders

A nationwide shortage of individuals with Ph.D.s in the 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 credits)
- Methods of measurement in CSD (CSD 805, Methods of Measurement in CSD, 3 credits)
- Professional issues and development (CSD 806, CSD 807, Ph.D. Professional Development Seminar I; Ph.D. Professional Development Seminar II, 1 credit each)
- 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]

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	Credit Hours
Core course work	8
Major concentration course work	14
Outside, related course work	6
Research tools	12
Directed research	6
Teaching/Supervision	2
Dissertation (minimum of 9 credits)	9
	57

Sample Curriculum for Post-Bachelors

Requirements	Credit Hours
Post-Bachelors course work (individually determined)	36-44
Core course work	8
Major concentration course work	14
Outside, related course work	6
Research tools	12
Directed research	6
Teaching/Supervision	2
Dissertation (minimum of 9 credits)	9
	93-101

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

Requirements	Credit Hours
Doctor of Audiology requirements (includes 6 credits of dissertation)	100
Core course work	8
Major concentration course work	3
Outside, related course work	6
Research tools	3
Directed research	3
Teaching/Supervision	2
Dissertation (minimum of 5 credits)	5
	130

Sample Curriculum for Post Au.D.

Requirements	Credit Hours
Core course work	8
Major concentration course work	3
Outside, related course work	6
Research tools	3
Directed research	3
Teaching/Supervision	2
Dissertation (minimum of 5 credits – assumes 6 dissertation credits in Au.D.)	5
	30

Doctor of 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	Credit Hours
CSD 511. Instrumentation in Audiology	3
CSD 512. Anatomy and Physiology of the Auditory and Vestibular Systems	3
CSD 513. Anatomy and Physiology of the Central Auditory Pathway	2
CSD 514. Audiologic Assessment	3
CSD 515. Human Communication and Aural Rehabilitation	3
CSD 516. Vestibular Physiology and Testing	3
CSD 523. Psychoacoustics	3
CSD 531. Industrial Audiology	2
CSD 533. Business Applications	3
CSD 551. Introduction to Hearing Aids	3
CSD 600. Research in Audiology	3
CSD 611. Neurophysiologic Measures I	5
CSD 621. Neurophysiologic Measures II	5
CSD 622. Advanced Hearing Aids	4
CSD 633. Auditory Pathophysiology	3
CSD 711. Pediatric Audiology	3
CSD 731. Medical Audiology	2
CSD 920. Dissertation	9-12
Seminars	
CSD 510. Seminar in Audiology (Clinical Methods I)	1
CSD 525. Seminar in Audiology (Clinical Methods II)	1
CSD 550. Seminar in Audiology (Tinnitus)	2
CSD 620. Seminar in Audiology (Research Proposal)	3
CSD 659. Readings and Research in Audiology	3
CSD 710. Seminar in Audiology (Geriatric Audiology)	1
CSD 720. Seminar in Audiology (Cochlear Implants)	2
CSD 810. Professional Seminar in Audiology	1
CSD 820. Professional Seminar in Audiology	1
Clinical Practicum	
CSD 519. Audiology Clinical Practicum A	3
CSD 539. Audiology Clinical Practicum B	2
CSD 619. Audiology Clinical Practicum C	3
CSD 629. Audiology Clinical Practicum D	3
CSD 639. Audiology Clinical Rotation A	3
CSD 719. Audiology Clinical Rotation B	3
CSD 729. Audiology Clinical Rotation C	3
CSD 819. Audiology Externship A or CE 850	1-6
CSD 829. Audiology Externship B or CE 850	1-6
CSD 839. Audiology Externship C or CE 850	1-6
	100 (minimum)

Master of Science (M.S.) Degrees

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 Applied Laboratory, 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. Students that have not completed all prerequisite course work may be admitted in a conditional status to the on-campus program.

Most students will be admitted as traditional on-campus students. However, the department also participates in a statewide collaborative online masters 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 //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	Credit Hours
CSD 500. Introduction to Research in Communication Sciences and Disorders	2
CSD 522. Communication Disorders of the Traumatically Brain Injured	2
CSD 527. Aging and Communication	1
CSD 528. Autism	1
CSD 529. Augmentative Communication	1
CSD 530. Early Intervention	1
CSD 544. Evaluation and Treatment of Swallowing Disorders	2
CSD 560. Neuromotor Speech Disorders	3
CSD 604. Neuroanatomy and Neurophysiology of Speech and Language	3
CSD 605. Physiological and Acoustical Phonetics	3
CSD 623. Advanced Study of Phonological Disorders	3
CSD 625. Pediatric Dysphagia	1
CSD 632. Processes and Disorders of Speech Fluency	2
CSD 640. Advanced Children's Language Disorders	3
CSD 641. Language Disorders in Adults	3
CSD 656. Voice Disorders	3
Clinical Practicum	10
CSD 581. Intern Speech Practicum – required	2
CSD 582. Intern Speech Practicum – required	2
CSD 583. Summer Intern Speech Practicum – required	2
CSD 682. Extern Speech Practicum – required	2
CSD 683. Extern Speech Practicum – required	2-7
or CE 650. Graduate Internship	2-7
Electives	
CSD 515. Human Communication and Aural Rehabilitation	3
CSD 520. Advanced Sign Language	3
CSD 680. Reading and Research	1 - 3
CSD 700. Thesis	6
	44 (minimum)

M.S. in Speech-Language Pathology Requirements (online via DLVE-SLP)

Students interested in the DLVE-SLP program should consult www.csd.jmu.edu/dlve-slp/ for more detailed information and the name of a contact person.

Required Courses	Credit Hours
CSD 500. Introduction to Research in Communication Sciences and Disorders	2
CSD 522. Communication Disorders of the Traumatically Brain Injured	2
CSD 527. Aging and Communication	1
CSD 528. Autism	1
CSD 529. Augmentative Communication	1
CSD 530. Early Intervention	1
CSD 544. Evaluation and Treatment of Swallowing Disorders	2
CSD 560. Neuromotor Speech Disorders	3
CSD 604. Neuroanatomy and Neurophysiology of Speech and Language	3
CSD 605. Physiological and Acoustical Phonetics	3
CSD 623. Advanced Study of Phonological Disorders	3
CSD 625. Pediatric Dysphagia	1
CSD 632. Processes and Disorders of Speech Fluency	2
CSD 640. Advanced Children's Language Disorders	3
CSD 641. Language Disorders in Adults	3
CSD 656. Voice Disorders	3
Clinical Practicum	10
CSD 581. Intern Speech Practicum – required	2
CSD 582. Intern Speech Practicum – required	2
CSD 583. Summer Intern Speech Practicum – required	2
CSD 682. Extern Speech Practicum – required	2
CSD 683. Extern Speech Practicum or CE 650 – required	2-7
Electives	
CSD 515. Human Communication and Aural Rehabilitation	3
CSD 520. Advanced Sign Language	3
CSD 680. Reading and Research	1-3
CSD 700. Thesis	6
	44 (minimum)

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.

M.S. in Communication Sciences and Disorders Requirements

Required Courses	Credit Hours
Category A: Research Design and Statistics	(minimum) 9
CSD 500. Introduction to Research in Communication Sciences and Disorders	2-3
or CSD 600. Research in Audiology	
Choose, in conjunction with major adviser, at least 6 credits from the following:	6
PSYC 600. Introduction to Measurement and Statistics	
PSYC 604. Computer Assisted Data Management	

PSYC 608. Multivariate Statistical Methods
PSYC 609. Applied Research Methods
PSYC 840. Qualitative Research Design and Analysis
HTH 655. Research Techniques
or other courses as approved

Category B: Speech/Hearing Sciences and Instrumentation	(minimum) 6
Choose, in conjunction with major adviser, at least 6 credits from the following:	6
CSD 511. Instrumentation in Audiology	
CSD 512. Anatomy and Physiology of the Auditory and Vestibular Systems	
CSD 513. Anatomy and Physiology of the Central Auditory Pathway	
CSD 523. Psychoacoustics	
CSD 604. Neuroanatomy and Neurophysiology of Speech and Language [2]	
CSD 605. Physiological and Acoustical Phonetics [2]	
Category C: Areas of Concentration (Complete one area)	(minimum) 9
Area 1. Adult Neurogenic Communication Impairment	
CSD 718. Independent Study	3
Choose at least 6 credits, as approved by major adviser, from the following:	6
CSD 515. Human Communication and Aural Rehabilitation	
CSD 522. Communication Disorders of the Traumatically Brain Injured	
CSD 527. Aging and Communication	
CSD 532. Counseling in Audiology	
CSD 544. Evaluation and Treatment of Swallowing Disorders	
CSD 560. Neurometer Speech Disorders	
CSD 641. Language Disorders in Adults	
CSD 710. Geriatric Audiology	
Area 2. Pediatric Communication Impairment	
CSD 718. Independent Study	3
Choose at least 6 credits, as approved by major adviser, from the following:	6
CSD 515. Human Communication and Aural Rehabilitation	
CSD 528. Autism	
CSD 529. Augmentative Communication	
CSD 530. Early Intervention	
CSD 623. Advanced Study of Phonological Disorders	
CSD 625. Pediatric Dysphagia	
CSD 640. Advanced Children's Language Disorders	
Area 3. Speech Production Disorders	
CSD 718. Independent Study	3
Complete at least 6 credits, as approved by major adviser, from the following:	6
CSD 560. Neuromotor Speech Disorders	
CSD 604. Neuroanatomy and Neurophysiology of Speech and Language [2]	
CSD 605. Physiological and Acoustical Phonetics [2]	
CSD 651. Disorders of Speech Resonance	
CSD 656. Voice Disorders	
Area 4. Hearing and Hearing Disorders	
CSD 718. Independent Study	3
Complete at least 6 credits, as approved by major adviser, from the following:	6
CSD 512. Anatomy and Physiology of the Auditory and Vestibular Systems	

CSD 513. Anatomy and Physiology of the Central Auditory Pathway
CSD 516. Vestibular Physiology and Testing
CSD 523. Psychoacoustics
CSD 611. Neurophysiologic Measures I
CSD 621. Neurophysiologic Measures II
CSD 633. Auditory Pathophysiology

Category D: Research and Thesis	(minimum) 12
CSD 717, 791, 792, 793, or 817, 917. Directed Research	6
CSD 700. Thesis	6
	(minimum) 36

2 These courses cannot be used to complete requirements in more than one category of study.

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 with language-impaired children in Virginia. Contact the graduate director in the department for information.

Course Offerings

Communication Sciences and Disorders

CSD 500. Research in Communication Sciences and Disorders. *2 credits.*
Focuses on both basic and applied research interpretation.

CSD 501. Workshops in Speech-Language Pathology and Audiology. *3 credits.*
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). *1-3 credits.*
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 and integration of information across didactic and practical knowledge toward clinical skill development.

CSD 511. Instrumentation in Audiology. *3 credits.*
A study of topics and procedures of instrumentation 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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
Supervised clinical practicum at the Communication Sciences and Disorders Applied Laboratory and a variety of other settings. Lab fee required. *Prerequisite: CSD 510.*

CSD 520. Advanced Sign Language. *3 credits.*
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 credits.*
An overview of the role of speech-language pathology in the interdisciplinary management of cognitive-communicative deficits associated with traumatic brain injury.

CSD 523. Psychoacoustics. *3 credits.*
A study of the relationship between a sound stimulus and the behavioral response it produces in a listener.

CSD 524. Audiologic Assessment II. *3 credits.*
A study of various measures of auditory function including an overview of common physiologic techniques of hearing and balance, tests of pseudohypacusis, and central auditory dysfunction. Consideration is provided to variation in technique for different age populations and the difficult-to-test.

CSD 525. Seminar in Audiology (Clinical Methods II). *1-3 credits.*
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 526. Supervision in Speech Language Pathology and Audiology. *1 credit.*
The American Speech-Language-Hearing Association guidelines for clinical supervision form the basis for the study of the supervisory process. Problems in supervision and current research will offer students models and techniques to apply as a supervisee or supervisor.

CSD 527. Aging and Communication. *1 credit.*
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 credit.*
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 credit.*
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 credit.*
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 credits.*
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 532. Counseling in Audiology. *2 credits.*
This course introduces graduate students to counseling within the discipline of audiology, particularly treating special needs of individuals and the families/caregivers of individuals with hearing loss. Indicators that suggest counseling as an additional service are also covered.

CSD 533. Business Applications in Audiology. *3 credits.*
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 credits.*
Supervised clinical practicum at the Communication Sciences and Disorders Applied Laboratory and a variety of other settings. Lab fee required. *Prerequisites: CSD 519 and CSD 525.*

CSD 540. Language Development and Disorders in Children for School Personnel. *3 credits.*
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. *2 credits.*
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). *1-3 credits.*
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 credits.*
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. *2 credits.*
The objective of this course is to familiarize students with the 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.

CSD 561. AR for Audiology. *1 credit.*
Clinical practicum in aural rehabilitation.

CSD 563. SLP for Audiology. *1 credit.*
Speech-language pathology practicum for the audiology major.

CSD 581. Intern Speech Practicum. *2 credits.*
Speech-language pathology practicum. This particular practicum course must be completed as part of the total 10 credits in practicum courses.

CSD 582. Intern Speech Practicum. *2 credits.*
Speech-language pathology practicum. This practicum course must be completed as part of the total 10 credits in practicum courses. Satisfactory completion of the course requires participation in professional development activities as outlined in the course syllabus, in addition to clinical practicum. *Prerequisites: CSD 581, CSD 623 and CSD 640 or permission of instructor.*

CSD 583. Summer Intern Speech Practicum. *2 credits.*
Speech-language pathology practicum. This particular practicum course must be completed as part of the total 10 credits in practicum courses. *Prerequisites: CSD 581, CSD 623 and CSD 640 or permission of instructor.*

CSD 600. Research in Audiology. *3 credits.*
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 and Language. *3 credits.*
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 credits.*
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. *5 credits.*
Study of the neurophysiological and electrophysiological properties of the human peripheral and central auditory pathways.

CSD 619. Audiology Clinical Practicum C. *3 credits.*
Supervised clinical practicum at the Communication Sciences and Disorders Applied Laboratory and a variety of other settings. *Prerequisite: CSD 539 or permission of instructor.*

CSD 620. Seminar in Audiology (Research Proposal). *1-3 credits.*
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. *5 credits.*
Advanced study of the neurophysiological and electrophysiological properties of the human auditory and related sensory and motor systems.

CSD 622. Advanced Hearing Aids. *4 credits.*
An advanced study of hearing handicap and its prosthetic management. Various technologies, prescription methods and verification procedures are critically reviewed.

CSD 623. Advanced Study of Phonological Disorders. *3 credits.*
Articulatory phonetics, phonological processes and co-articulation are considered. Emphasis is given to analysis of phonological delays/disorders and specific procedures of remediation.

CSD 625. Pediatric Dysphagia. *1 credit.*
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 credits.*
Supervised clinical practicum at the Communication Sciences and Disorders Applied Laboratory and a variety of other settings. *Prerequisite: CSD 619 or permission of instructor.*

CSD 632. Processes and Disorders of Speech Fluency. *2 credits.*
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 credits.*
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 Clinical Rotation A. *3 credits.*
Supervised clinical practicum at clinical settings external to the Communication Sciences and Disorders Applied Laboratory. *Prerequisites: CSD 629, permission of instructor and head of department.*

CSD 640. Advanced Children's Language Disorders. *3 credits.*
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. *2 credits.*
Theoretical comparative aspects and clinical management of aphasia in adults are emphasized. Communication disorders associated with right hemisphere brain damage are also considered.

CSD 649. Selected Clinical Topics in Audiology. *4 credits.*
Discussion of advanced topics relevant to audiology, emphasizing the synthesis of theory with clinical practice.

CSD 651. Disorders of Speech Resonance. *2 credits.*
The study of cleft palate and other orofacial abnormalities and their associated speech disorders. Advanced study in the diagnosis and management of cleft palate speech will be provided.

CSD 656. Voice Disorders. *3 credits.*
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 659. Reading and Research in Audiology. *1-3 credits.*
This course will review recent professional literature of interest with emphasis on content and research design. For students not electing the thesis option, a study of empirical nature will be required.

CSD 680. Reading and Research. *1-3 credits.*
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. Extern Speech Practicum. *2 credits.*
Supervised speech-language pathology practicum. This practicum course must be completed as part of the total 10 credits in practicum courses. Length and frequency of clinical experience determined by CAC and the director of clinical education in accordance with student's clinical needs. *Prerequisites: CSD 582, CSD 583, and, if in an adult setting off-campus, CSD 544.*

CSD 683. Extern Speech Practicum. *2-7 credits.*

CE 650. Graduate Internship. *1-5 credits.*
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. *Prerequisites: CSD 682, permission of head of department and, if in an adult setting, CSD 544.*

CSD 690. Advanced Seminar in Speech Pathology and Audiology. *1-3 credits.*
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 691. Professional Seminar in Audiology. *1-3 credits.*
A review of professional training emphasizing case management using a grand rounds approach. This course will serve as a capstone experience integrating theory and practice; it will be offered in conjunction with the full-time externship experience.

CSD 698. Comprehensive Continuance. *1 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated.

CSD 699. Thesis Continuance. *2 credits.*
Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed will not be required to complete the written comprehensive examination. Students should talk with their advisers prior to selecting this option.

CSD 700. Thesis Research. *1-6 credits.*
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 credit.*
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 credits.*
Normal and pathological development of the auditory system; pediatric audiometric assessment; auditory and communication aspects in the habilitation of hearing-impaired children.

CSD 717, 817, 917. Directed Research. *1-3 credits.*
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, 818, 918. Independent Study. *1-3 credits.*
This course sequence provides opportunities for in-depth study in an area of special interest as directed by a faculty member.

CSD 719. Audiology Clinical Rotation B. *3 credits.*
Supervised clinical practicum at clinical settings external to the Communication Sciences and Disorders Applied Laboratory. *Prerequisites: CSD 639 and permission of head of department.*

CSD 720. Seminar in Audiology (Cochlear Implants). *1-3 credits.*
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 721. Hearing Aids and Signal Processing. *3 credits.*
Study of advanced concepts in signal processing as applied to real-world applications in digital speech processing, active noise reduction, and applications in advanced hearing device designs and telecommunications.

CSD 729. Audiology Clinical Rotation C. *3 credits.*
Supervised clinical practicum at clinical settings external to the Communication Sciences and Disorders Applied Laboratory. *Prerequisites: CSD 719 and permission of head of department.*

CSD 731. Medical Audiology. *2 credits.*
Advanced study of the diagnosis and evaluation of hearing and balance disorders.

CSD 791. Directed Research. *1 credit.*
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 792. Directed Research. *1 credit.*
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 793. Directed Research. *1 credit.*
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 credits.*
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 credit.*
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 credit.*
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. *1-3 credits.*
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 819. Audiology Externship A. *1-6 credits.*
Full-time clinical practicum with limited supervision at clinical settings external to the Communication Sciences and Disorders Applied Laboratory. *Prerequisites: CSD 729, permission of instructor and head of department.*

CE 850. Professional Internship. *1-5 credits, which may be repeated for credit.*
Full-time clinical practicum with limited supervision at clinical settings external to the Communication Sciences and Disorders Applied Laboratory. *Prerequisites: CSD 729, permission of instructor and head of department.*

CSD 820. Professional Seminar in Audiology. *1-3 credits.*
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 829. Audiology Externship B. *1-6 credits.*
Full-time clinical practicum with limited supervision at clinical settings external to the Communication Sciences and Disorders Applied Laboratory. *Prerequisite: CSD 819 or permission of instructor.*

CE 850. Professional Internship. *1-5 credits, which may be repeated for credit.*
Full-time clinical practicum with limited supervision at clinical settings external to the Communication Sciences and Disorders Applied Laboratory. *Prerequisites: CSD 819, permission of instructor and head of department.*

CSD 830. Professional Seminar in Audiology. *1-3 credits.*
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. *1-6 credits.*
Full-time clinical practicum with limited supervision at clinical settings external to the Communication Sciences and Disorders Applied Laboratory. This course may be repeated with permission of instructor for up to 6 credits. *Prerequisite: CSD 829 or permission of instructor.*

CE 850. Professional Internship. *1-5 credits, which may be repeated for credit.*
Full-time clinical practicum with limited supervision at clinical settings external to the Communication Sciences and Disorders Applied Laboratory. This course may be repeated, with permission of the instructor, for up to 6 credits. *Prerequisites: CSD 829, permission of instructor and department head.*

CSD 841. Teaching Experience in CSD. *2 credits.*
With a faculty member, 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 of student's learning at the college level, and method of assessment at the college level.

CSD 842. Supervision Experience in CSD. *2 credits.*
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 850. Advanced Seminar in CSD: Adult Language Disorders. *2-3 credits.*
This seminar focuses on the current views of etiology, assessment and treatment procedures of adult language disorders.

CSD 851. Advanced Seminar in CSD: Child Language Disorders. *2-3 credits.*
This seminar focuses on the current views of etiology, assessment and treatment procedures of child language disorders.

CSD 852. Advanced Seminar in CSD: Communication Enhancement. *2-3 credits.*
This seminar focuses on the current views of assessment and treatment procedures of communication enhancement.

CSD 853. Advanced Seminar in CSD: Aerodigestive Concerns. *2-3 credits.*
This seminar focuses on the current views of etiology, assessment and treatment procedures of aerodigestive disorders.

CSD 854. Advanced Seminar in CSD: Early Intervention. *2-3 credits.*
This seminar focuses on the current views of assessment and treatment procedures of early intervention.

CSD 855. Advanced Seminar in CSD: Fluency Disorders. *2-3 credits.*
This seminar focuses on the current views of etiology, assessment and treatment procedures of fluency disorders.

CSD 856. Advanced Seminar in CSD: Normal Communication Development. *2-3 credits.*
This seminar focuses on the current views of human communication development over the life span.

CSD 857. Advanced Seminar in CSD: Motor Speech Disorders. *2-3 credits.*
This seminar focuses on the current views of etiology, assessment and treatment procedures of motor speech disorders.

CSD 858. Advanced Seminar in CSD: Neurolinguistics. *2-3 credits.*
This seminar would be devoted to study and discussion of one or more topics current in neurolinguistic investigation. Possible topics include PET 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 859. Advanced Seminar in CSD: Clinical Phonology Disorders. *2-3 credits.*
This seminar focuses on the current views of etiology, assessment and treatment procedures of phonological disorders.

CSD 860. Advanced Seminar in CSD: Disorders of Resonance. *2-3 credits.*
This seminar focuses on the current views of etiology, assessment and treatment procedures of disorders of resonance.

CSD 861. Advanced Seminar in CSD: Voice Disorders. *2-3 credits.*
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. *2-3 credits.*
This seminar focuses on advanced study of selected topics of interest in communication sciences and disorders. May be repeated for credit.

CSD 865. Advanced Seminar in CSD: Infant Language and Speech Perception. *2-3 credits.*
Topics include infant speech perception, production and the link between production and perception, infant language development in the larger cognitive context highlighting the links between language, memory, motor skills, vision, innate ability and consciousness, the impact of developmental disorders on early language development, and how ontogeny can inform phylogeny. Transcription of infant speech, identification of words and play activities, and analysis of speech perception data are included.

CSD 866. Advanced Seminar in CSD: Genetic Bases of Communication Disorders. *2-3 credits.*
This seminar will examine current knowledge with regard the genetic bases of a range of hearing, speech and language impairments. Implications for clinical intervention and future research directions will be explored.

CSD 867. Experimental Phonetics. *3 credits.*
Advanced and in-depth study of speech perception and production, including acoustics, intelligibility, current technologies and instrumentations, and theoretical models guiding research approaches.

CSD 920. Doctoral Dissertation in CSD. *1-12 credits.*
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 credit.*
Required continuance for dissertation after 12 credits earned for CSD 920.

Computer Science

Department of Computer Science

(540) 568-8772 www.cs.jmu.edu

Department Head

Dr. Sharon Simmons

Graduate Program Directors

Dr. Florian Buchholz

Dr. M. Hossain Heydari

Professors

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Associate Professors

M. Aboutabl, F. Buchholz, M. Norton, B. Tjaden, X. Wang

Assistant Professor

M. Kirkpatrick

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.

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.

Information Security

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.

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.

Concentrations

Concentration in Information Security

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.

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).

Information Security Concentration Requirements

Minimum Requirements	Credit Hours
CS 523. Ethics, Law and Policy in Cyberspace	3
CS 550. Operating Systems	3
CS 555. Secure Software Engineering	3
CS 560. Networks and Network Security	3
CS 621. Software Assurance	3
CS 625. Secure Operations	3

CS 627. Cryptography: Algorithms and Applications	3
CS 652. Formal Methods for Information Security	3
CS 660. Advanced Network Security	3
	27

Thesis Route	Credit Hours
CS 700. Thesis	6
	33

Non-Thesis Route	Credit Hours
CS 633. Computer Forensics	3
CS 675. Distributed Computing and Security	3
or CS 685. Selected Topics	
	33

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	Credit Hours
CS 510. Object Oriented Programming	3
CS 511. Computer Organization	3
CS 512. Data Structures	3
CS 515. Foundations of Computer Science	3

Certificate Courses

Eligible students may take certificate courses CS 502 – CS 506 to receive specific security certificates.

Concentration in Digital Forensics

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 can be found at //cs.jmu.edu/forensics/index.html.

Digital Forensics Concentration Requirements

Minimum Requirements	Credit Hours
CS 530. Programming Languages	3
CS 550. Operating Systems	3
CS 552. Applied Complexity Theory	3
CS 557. Information Security	3
CS 610. Networking and Security	3
CS 630. Complier Theory and Implementation	3
CS 633. Computer Forensics	3
CS 635. Secure Network Operations	3
CS 640. Malware Analysis	3
Approved elective	3
	30

Thesis Route	Credit Hours
CS 700. Thesis	6
	36

Non-Thesis Route	Credit Hours
Approved electives	6
	36

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. Additional information can be found at //cs.jmu.edu/forensics/combinedprogram.html.

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 hours of credit by the end of the junior year. 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 (completion of an undergraduate version of CS 530 is required as a condition of admission).

Five-Year Digital Forensics Concentration Requirements

Minimum Requirements	Credit Hours
CS 550. Operating Systems	3
CS 557. Information Security	3
CS 610. Networking and Security	3
CS 630. Compiler Theory and Implementation	3
CS 633. Computer Forensics	3
CS 635. Secure Network Operations	3
CS 640. Malware Analysis	3
Approved elective	3
	24

Thesis Route	Credit Hours
CS 700. Thesis	6
	30

Non-Thesis Route	Credit Hours
Approved electives	6
	30

These undergraduate courses are required for admission to this concentration:

- CS 227/228. Discrete Structures I and II
- CS 239. Advanced Computer Programming
- CS 240. Algorithms and Data Structures
- CS 345. Software Engineering
- CS 350. Computer Organization
- CS 430. Programming Languages
- CS 450. Operating Systems

The department strongly encourages that this undergraduate course should be taken by undergraduates intending to apply for this concentration: CS 452, Analysis of Algorithm.

This undergraduate course should not be taken by undergraduates intending to apply for this concentration: CS 457, Information Security.

Certificate Programs

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 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	Credit Hours
CS 550. Operating Systems	3
CS 557. Information Security	3
CS 610. Networking and Security	3
	9

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	Credit Hours
CS 550. Operating Systems	3
CS 557. Information Security	3
CS 574. Database Systems	3
	9

Course Offerings

Computer Science

CS 501. Workshop in Computer Science. *1-3 credits.*
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 credits.*
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 evaluation 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 credit.*
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 credit.*
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 credit.*
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 credit.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
Study of the fundamental principles of programming language design and their realization in actual programming languages. Examines programming languages from the procedural, object-oriented, and functional and declarative paradigms. Introduces basic concepts of grammars and parsing. *Prerequisites: CS 240 and CS 350, or CS 511 and CS 512, or equivalent.*

CS 547. Interaction Design. *3 credits.*
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.

CS 550. Operating Systems. *3 credits.*
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: CS 350, CS 511 or equivalent.*

CS 552. Applied Complexity Theory. *3 credits.*
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: CS 240, CS 512 or equivalent.*

CS 555. Secure Software Engineering. *3 credits.*
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 credits.*
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, cryptology, PKI key management, application-level security issues and security evaluation. *Prerequisite: CS 550.*

CS 560. Networks and Network Security. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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. *Prerequisites: CS 510 and knowledge of calculus.*

CS 610. Networking and Security. *3 credits.*
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 620. Introduction to Information Security. *3 credits.*
Provides the manager with a broad overview of the threats to the security of information systems, the responsibilities and basic tools for information security and for the areas of training and emphasis needed in organizations to reach and maintain a state of acceptable security. The course provides an introduction to the language of information security and provides an overview of hardware, software and firmware components of an information security system, as well as their integration into an organization's information system operations for policy makers. The object of this course is to enable managers to make more informed policy and procedural evaluations in the information security area.

CS 621. Software Assurance. *3 credits.*
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. *Prerequisites: CS 555 and CS 652.*

CS 625. Secure Operations. *3 credits.*
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 credits.*
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: CS 252, MATH 227 or CS 515.*

CS 630. Compiler Theory and Implementation. *3 credits.*
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 credits.*
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 560, CS 610 or equivalent.*

CS 634. Natural Language Processing. *3 credits.*
Implementation of computer-based, natural language understanding systems; natural language syntax and processing knowledge representation, natural languages generation. *Prerequisite: CS 555.*

CS 635. Secure Network Operations. *3 credits.*
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 credits.*
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.

CS 644. Artificial Intelligence. *3 credits.*
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 649. Operating Systems II. *3 credits.*
A study of various topics in operating systems such as distributed file systems, security, architectural support for operating systems, performance measurement, recovery management and real-time systems. *Prerequisite: CS 550.*

CS 650. Computer Networks. *3 credits.*
The Open Systems Interface reference model. Network hardware, topologies and routing algorithms, reliability and security, application programs. Examples of various networks and protocols such as Ethernet, TCP/IP, NFS and USENET. *Prerequisite: CS 550.*

CS 652. Formal Methods for Information Security. *3 credits.*
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 655. Programming Languages II. *3 credits.*
A study of various topics in programming languages such as proof techniques, formal specification of syntax and semantics, operational, denotational and axiomatic semantics. *Prerequisite: CS 555.*

CS 660. Advanced Network Security. *3 credits.*
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.

CS 665. Software Requirements and Design. *3 credits.*
Study of the state of the art in software requirements engineering and design. Topics include techniques for system specification and verification, security models, software analysis and design methods and techniques, software architectures, and design patterns. *Prerequisite: CS 555.*

CS 666. Software Construction and Testing. *3 credits.*
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 674. Database Systems II. *3 credits.*
Continuation of CS 574. *Prerequisite: CS 574.*

CS 675. Distributed Computing and Security. *3 credits.*
Covers theoretical and applied aspects of security and privacy needed for middleware and service-ware to offer reasonable assurance for modern distributed systems. Topics include distributed systems architectures, technologies and management; distributed system design, security and privacy issues; and applications such as Web services and mobile commerce. *Prerequisite: CS 560.*

CS 676. Distributed Databases. *3 credits.*
Distributed databases and networks, levels of distribution, transparency, fragments and their allocation, distributed queries, optimization, and concurrency. *Prerequisite: CS 574.*

CS 680. Reading and Research. *3 credits.*
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 credits.*
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 690. Practicum. *3 credits.*
Provides a variety of supervised project, laboratory, leadership and instructional experiences. This course is graded on a satisfactory/unsatisfactory (S/U) basis. May be repeated for credit, but no more than six hours can be counted toward a degree program. *Prerequisites: Consent of instructor and program coordinator.*

CS 698. Comprehensive Continuance. *1 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

CS 699. Thesis Continuance. *1 credit.*
Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

CS 700. Thesis Research. *2-3 credits.*
This course is graded on a satisfactory/unsatisfactory (S/U) basis.

Counseling and Supervision Doctoral Program

Department of Graduate Psychology
(540) 568-6522 http://psyc.jmu.edu/counseling/supervision/index.html

Graduate Program Coordinator
Dr. Lennis Echterling

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 course work 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 master counselors, supervisors, educators, administrators and scholars 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.

Degree Requirements

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

Required Courses	Credit Hours
PSYC 605. Intermediate Inferential Statistics	3
PSYC 810. Advanced Multicultural Issues	3
PSYC 840. Qualitative Research Design and Analysis	3
PSYC 853. Advanced Supervision in Counseling	3
PSYC 860. Advanced Counseling Theory	3
PSYC 861. Advanced Counseling Techniques	3
PSYC 862. Leadership and Advocacy in Counseling	3
PSYC 863. Counselor Education	3
PSYC 866. Crisis and Emergency Services for Counselors	3

PSYC 881. Issues and Techniques in Research and Evaluation	3
PSYC 882. Doctoral Practicum in Counseling	3
PSYC 892. Doctoral Internship in Counseling, Supervision and Teaching	6
PSYC 900. Doctoral Dissertation	6
Elective	3
	48

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.

Early, Elementary and Reading Education

Early, Elementary and Reading Education Program

(540) 568-6255 www.jmu.edu/coe/eere/

Graduate Program Directors

Dr. Holly McCartney Dr. Marianne Baker
Dr. Dorothy Sluss Dr. Susan Barnes

Professors

N. Barbour, D. Carrington, T. Harris, J. Kindig, M. Shaeffer, D. Sluss

Associate Professors

M. Baker, G. Font, M. Hughes, S. Mathur, H. McCartney

Assistant Professors

J. Almarode, S. Barnes, A. Bodle, K. Dredger, S. Kang, D. Loveless, J. Newton, P. Sullivan

Instructor

M. Reish

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 the state of 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.) with a concentration in Inclusive Early Childhood Education, a continuation of the undergraduate IECE program.
- 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.

Early Childhood Education

Master of Arts in Teaching with a concentration in Early Childhood Education (PreK-3)

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.
- Names and contact information for three references
- Content prerequisites based on a transcript review conducted by the program director.
- Faculty interview.
- GRE or MAT scores at the 25th percentile or higher.
- Admission to Teacher Education including passing scores on both Praxis I and Praxis II (Elementary)
- Prerequisites courses include but are not limited to:
- GPSYC 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.

Degree Requirements

Requirements	Credit Hours
*G*PSYC 160. Lifespan Human Development (prerequisite)	3
EDUC 300. Foundations of American Education (prerequisite)	3
READ 566. Literacy Acquisition and Development of the Young Reader	3
READ 636. Primary Grades Literacy Learning	3
ECED 508. Observation and Study of Young Children	3
ECED 510. Creativity and the Arts in ECED	3
ECED 511. ECED Practicum with Attention to Diversity	3
ECED 512. Facilitating Children's Natural and Social Science Constructions	3
ECED 641. Working with Parents of Young Children	2
ECED 544. Children and Mathematics in Grades PreK-3	3
ECED 609. Constructivist Curriculum Design and Evaluation	3
ECED 611. ECED Practicum with Attention to Special Education	3
ELED 632. Inquiry in Elementary Education	3
ELED 633. Seminar in Education Inquiry	1
ECED 690. Student Teaching Internship in ECED	6
	45

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.

Inclusive Early Childhood Education

Master of Arts in Teaching with a concentration in 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 3 years) and Early Childhood Education (PK-3rd grade).

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	Credit Hours
IECE 600. Teacher as Researcher	3
IECE 612. Teacher as Decision Maker	3
IECE 613. Practicum in Education of Young Children	3
IECE 614. Individualized Behavior Intervention for Young Children	3
IECE 620. Teacher As Professional	2
IECE 630. Teacher As Leader	2
IECE 632. Play and Creativity With Young Children	3
EXED 625. Medical Aspects Impacting Young Children	3
IECE 680. Student Teaching With Young Children	8
	30

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.

Elementary Education (PreK-6)

Master of Arts in Teaching with a concentration in Elementary Education (PreK-6)

The Elementary Education MAT 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 II: Elementary Education

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.

Course Requirements	Credit Hours
ELED 510. Creativity and the Arts in Elementary Education	3
ELED 533. Children and Mathematics II: Data, Chance and Space	3
ELED 621. Practicum in Teachers and Learners as Inquirers	2
ELED 622. Seminar in Inquiry	1
ELED 632. Inquiry in Elementary Education	3
READ 595. Literacy Across the Curriculum	3
ELED 570. Learning and Teaching in an Elementary Setting	3
ELED 641. Families, Schools and Communities	2
ELED 690. Internship in Teaching	8
Elective	3
	31

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 3.0 graduate G.P.A.

Reading Education

M.Ed. with a concentration in Reading Education

The Master of Education (M.Ed.) program with a concentration in Reading 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 Reading Education. These include:

- Baccalaureate degree from a regionally accredited college/university.
- GRE scores at the 25th percentile or higher for both the verbal and quantitative tests.
- Undergraduate grade point average of 2.75 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 relevant school personnel familiar with the candidate's teaching performance and leadership potential.

Program Mission and Outcomes

The purpose of the graduate program in reading 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 evaluative 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.

Master of Education in Reading Education Course Requirements

Required Course	Credit Hours
READ 582. Foundations of Literacy	3
READ 586. Children's and Adolescent Literature	3
READ 588. Writing Instruction	3
READ 595. Literacy Across the Curriculum	3
READ 600. Research and Research Methods in Literacy	3
READ 602. Word Knowledge: Phonics, Spelling, and Vocabulary	3
READ 604. Literacy Instruction for English Language Learners	3
READ 658. Practicum in Literacy Assessment and Intervention I	3
READ 660. Practicum in Literacy Assessment and Intervention II	3
READ 665. Organization and Supervision of Reading Programs	3
READ 670. Literacy Coaching and Internship	3
	33

Course Offerings

Early Childhood Education

ECED 501. Workshop in Early Childhood Education. *1-3 credits.*

Designed to provide students with workshop experiences related to current needs evident in early childhood programs. Topics selected 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.

ECED 508. Observation and Study of the Young Child. *3 credits.*

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: GPSYC 160.*

ECED 510. The Creative Arts in Early Childhood Education. *3 credits.*

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 credits.*

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: READ 566.*

ECED 512. Facilitating Children's Natural and Social Science Constructions. *3 credits.*
Study of the history, content, processes, teaching methods, and materials for teaching natural and social sciences in PreK-3. Focus is on constructivist learning theory, levels of inquiry, and national and state standards as applied to the selection of content, method and learning environment.

ECED 544. Children and Mathematics in Grades PreK-3. *3 credits.*
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 credits.*
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 credits.*
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: READ 636.*

ECED 613. Professionalism and Advocacy in Early Childhood Education. *3 credits. Fall only.*
An in-depth study of selected early childhood issues related to professionalism, advocacy, leadership and working with families in a diverse community.

ECED 614. Advanced Theories in Child Development. *3 credits.*
In-depth study of selected child development theories and direct observation as a foundation for purposeful and consistent instructional decision making. Emphasizes articulating a personally meaningful theory and gathering assessment data through direct observation for theory support. *Prerequisites: Core of M.Ed. and ECED 613. Corequisite: ECED 616.*

ECED 615. Administration and Supervision in Early Childhood Education. *3 credits.*
Study of the role of the administrator in facility planning, budgeting, staff development and personnel supervision in programs for young children. The role of the administrator as a change agent is examined. *Prerequisite: Permission of instructor.*

ECED 616. Advances in Early Childhood Practices. *3 credits.*
This field-based course provides opportunity for the student to synthesize and apply child development and curriculum theory. As educational decision-makers, students plan, implement and evaluate learning experiences for a multiage group of children. *Prerequisites: Master of Education core courses and ECED 613. Corequisite: ECED 614.*

ECED 619. Seminar in Early Childhood Education. *3 credits.*
Seminar experience providing in-depth consideration of the impact of research related to early childhood. Provides for integration and consolidation of knowledge acquired in graduate study and its application through inquiry experiences as the basis for instructional decisions. *Prerequisites: Master of Education core courses and ECED 613 or permission of the instructor.*

ECED 641. Working with Parents of Young Children. *2 credits.*
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: EDUC 632. Corequisite: ECED 690.*

ECED 680. Reading and Research. *3 credits.*
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 credits.*
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. *Prerequisites: ECED 508, ECED 510, ECED 511, ECED 512, ECED 544, ECED 609 and ECED 611; READ 566 and READ 636; ELED 632. Corequisites: ELED 641.*

Education

EDUC 501. Workshop in Education. *1-3 credits.*
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 505. Technology Skills for Educational Inquiry. *1 credit.*
This course is designed to prepare students for the effective use of the technology applications needed to conduct educational inquiry.

EDUC 520. Clinical Supervision Seminar. *3 credits.*
Designed to help teachers and other school personnel develop skills for guiding, supervising and evaluating persons receiving clinical experiences in the school setting. Emphasis will be on cooperative supervision of clinical experiences, exploring various clinical models and reacting to simulated situations involving students receiving clinical and field experiences. *Prerequisite: Full-time teaching experience.*

EDUC 525. Cross Cultural Education. *3 credits.*
The course provides students with knowledge of the effects of socio-cultural variables in an instructional setting.

EDUC 540. Educational Technology. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
The purpose of this course is to help the student develop skills, insights and understandings which will enable her or him to become an intelligent and critical consumer of educational inquiry and a productive participant in the inquiry process. *Prerequisites: Appropriate technology skills or EDUC 505.*

EDUC 631. Seminar in Educational Inquiry. *1 credit.*
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 641. Learning Theories and Practice. *3 credits.*
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 credits.*
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. *Note: EDUC 670, EDUC 671, EDUC 673 are now AHRD 670, AHRD 671, AHRD 673.*

EDUC 675M. Internship in Middle School Foreign Language Instruction. *4 credits.*
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. *Prerequisites: Admission to Teacher Education, admission to the MAT program and completion of all other MAT program course work including EDUC 570 Methods of Language Teaching. Corequisite: MSSE 650 Internship Seminar.*

EDUC 675S. Internship in Secondary School Foreign Language Instruction. *4 credits.*
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. *Prerequisites: Admission to Teacher Education, admission to the MAT program, and completion of all other MAT program course work including EDUC 570 Methods of Language Teaching. Corequisite: MSSE 650 Internship Seminar.*

EDUC 680. Reading and Research. *3 credits.*
Opportunities for directed reading and research in areas of special interest. Reading and research may be done only in the major field of study. *Prerequisites: EDUC 630 or equivalent, and written permission of the adviser and program coordinator.*

EDUC 682. Professional Development, Partnership and Advocacy. *3 credits.*
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. Comprehensive Continuance. *1 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

EDUC 699. Thesis Continuance. *2 credits.*
Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

EDUC 700. Thesis Research. *6 credits.*
This course is graded on a satisfactory/unsatisfactory (S/U) basis.

Elementary Education

ELED 501. Special Topics in Elementary Education. *3 credits.*
This course is designed to allow elementary education teacher candidates 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. *Prerequisites: ELED 411 or permission of instructor.*

ELED 510. Creativity and the Arts in Elementary Education. *3 credits.*
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 521. Practicum in Preadolescent Development. *1 credit.*
Supervised practicum in upper elementary grades focusing on individual differences and developmental characteristics of the age group. *Corequisite: ELED 522 A&B and ELED 524.*

ELED 524. Differentiated Instruction: Abilities, Culture and Language. *3 credits.*
Focus on the variation that is inherent in working with school-age children, particularly the variation that occurs as a result of ability, environment and experience, and how instructional strategies and the curriculum must be designed to build on the strengths each child brings to the learning experiences. *Corequisites: ELED 521 and 522 A&B.*

ELED 533. Children and Mathematics II: Data, Chance, and Space. *3 credits.*
The second of two courses that provide 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. *Prerequisites: MATH 207, ELED 411 and admission to The Graduate School.*

ELED 570. Learning and Teaching in an Elementary Setting. *3 credits.*
This course prepares pre-service elementary education teachers to teach in ways that promote student learning. Through an understanding of curriculum integration, pre-service teachers will design units of study that engage students in relevant and active learning. Methods for meeting the needs of a diverse student population will be explored. Issues of collaboration with other professionals in a school setting will be discussed. *Prerequisite: Admission to The Graduate School.*

ELED 613. Issues in Elementary/Middle Education. *3 credits.*
An in-depth study of selected elementary and middle grades issues related to professionalism, advocacy, leadership, and working with families in a diverse community. *Corequisites: ELED 680, ELED 632, ELED 633.*

ELED 621. Practicum with a Focus on Inquiry. *2 credits.*
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 credit.*
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 credits.*
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. For M.A.T. ECED: *Prerequisites: ECED 508 and ECED 511, READ 566, ECED 512 or ECED 544.*

ELED 633. Seminar in Education Inquiry. *1 credit.*
Focus on the application of education inquiry and its application to teaching. *Prerequisite: ELED 632. For M.A.T. ECED: Corequisite: ECED 690.*

ELED 641. Families, Schools and Communities. *2 credits.*
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 groups are emphasized. Resources for supporting parents and engaging community stakeholders are examined. *Prerequisite: ELED 411 and admission to The Graduate School.*

ELED 680. Student Teaching. *4 credits.*
Participants will experience the full range of conditions and tasks expected of a teacher for students in grades 4-6. They will be expected to develop and demonstrate competencies in teaching with the supervision and support of experienced teachers. *Prerequisite: Completion of the previous two semesters of course work.*

ELED 690. Internship in Teaching. *4 credits.*
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.*

Inclusive Early Childhood Education

IECE 600. Teacher as Researcher. *3 credits.*
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.*

EXED 635. Medical Aspects Impacting Young Children. *3 credits.*
This course will prepare students to understand the medical aspects and experiences of young children with disabling and at-risk conditions, and their families. Candidates will learn the impact of medical conditions on young children's development and learning, management of medical conditions, emergency care and technological support. Emphasis will be given to the role of the educator as a collaborative member of an inter-professional team.

IECE 612. Teacher as Decision Maker. *3 credits.*
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 600.*

IECE 613. Practicum in the Education of Young Children. *3 credits.*
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 600, IECE 612 or IECE 614.*

IECE 614. Individualized Behavior Intervention for Young Children. *3 credits.*
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. Teacher as Professional. *3 credits.*
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. *Prerequisites: IECE 600, IECE 612, IECE 614 and IECE 613. Corequisite: IECE 680.*

IECE 630. Teacher as Leader. *2 credits.*
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. *Prerequisites: IECE 620 and IECE 680.*

IECE 632. Creativity, Play and Representation. *3 credits.*
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. *Prerequisites: IECE 620 and IECE 680.*

IECE 680. Student Teaching in Inclusive Early Childhood Education. *2 4-credit experiences for a total of 8 credits.*
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. *Prerequisites: IECE 600, IECE 612, IECE 613 and IECE 614. Corequisite: IECE 620.*

Reading Education

READ 501. Workshop in Reading. *3 credits.*
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.

READ 566. Literacy Acquisition and Development of the Young Reader. *3 credits.*
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. *Corequisite: ECED 511.*

READ 582. Foundations of Early and Elementary Literacy. *3 credits.*
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 the preK-12 classrooms.

READ 586. Children's and Adolescent Literature. *3 credits.*
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 PreK-12 learner.

READ 588. Writing Instruction. *3 credits.*
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.

READ 595. Literacy Across the Curriculum. *3 credits.*
This course explores literacy-based learning in the preK-12 curriculum and the interdisciplinary nature of literacy.

READ 600. Research and Research Methods in Literacy. *3 credits.*
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.

READ 602. Word Knowledge: Phonics, Spelling, and Vocabulary. *3 credits.*
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.

READ 604. Literacy Instruction for English Language Learners. *3 credits.*
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.

READ 636. Primary Grades Literacy Learning. *3 credits.*
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. *Prerequisites: ECED 511, READ 566. Corequisite: ECED 611.*

READ 658. Practicum in Literacy Assessment and Intervention I. *3 credits.*
The course emphasizes the principals, practices and applications of a variety of literacy assessments to address a range of individual needs in early and elementary literacy. *Prerequisites: READ 582, READ 586, READ 588, READ 595, READ 602, READ 604.*

READ 660. Practicum in Literacy Assessment and Intervention II. *3 credits.*
The course emphasizes the principals, practices and applications of a variety of literacy assessments to address a range of individual needs in adolescent literacy. *Prerequisites: READ 582, READ 586, READ 588, READ 595, READ 602, READ 604.*

READ 665. Organization and Supervision of Reading Programs. *3 credits.*
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. *Prerequisites: READ 660 or permission of instructor.*

READ 670. Literacy Coaching and Internship. *3 credits.*
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. *Prerequisites: READ 582, READ 586, READ 588, READ 595, READ 600, READ 602, READ 604, READ 658, READ 660 and READ 665.*

READ 680. Reading and Research. *3 credits.*
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.*

READ 698. Comprehensive Continuance. *1 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

English

Department of English

215 Keezell Hall, MSC 1801
(540) 568-6170
www.jmu.edu/english/ grad_welcome.html

Academic Unit Head

Dr. Dabney Bankert

Graduate Program Director

Dr. Brooks Hefner

Professors

D. Bankert, M. Facknitz, A. Federico, J. Gabbin, D. Jeffrey, B. Johnson, L. Kutchins, M. Parker

Associate Professors

M. Canivell, K. Castellano, E. Cavanagh, S. Cote, M. Favila, D. Goode, B. Hefner, L. Henigman, R. Majors, D. Mookerjea-Leonard, R. Osotsi, M. Rankin, M. Rebhorn, M. Thompson

Assistant Professors

P. Bogard, A. Fagan, M. Godfrey, S. White

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: www.applyweb.com/apply/jmug.

Follow the instructions on that site for submitting all application materials (GRE scores, 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. Matthew Rebhorn
Director of Graduate Studies, Department of English
212 Keezell Hall, MSC 1801
921 Madison Drive
James Madison University
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.
- Graduate Record Examination General Test (GRE). We do not require the GRE subject examination in English.
- 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 at least 6 pages, with 10 pages preferred, showing the applicant's best work.
- 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.

Recommended Materials

- 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.

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. We consider all available material to help us judge whether a student is prepared for and capable of successful work on the graduate level and we stress 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.
- Satisfactory scores on the verbal and writing portions of the Graduate Record Examination General Test (GRE). While we have not established minimum scores, recent applicants and matriculated students have scored between 550-800 or 156-170 on the new scale (verbal) and 4.5-6.0 (writing).
- 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. 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. 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 (www.jmu.edu/english/graduate/grad_financial.html) 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, we try to complete our review in a month's time. Candidates are welcome to contact the graduate director for information about where we are in the process 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. Before beginning a teaching assistantship students must take ENG 501, Professional Seminar in College Composition. Completion of the third year of a college foreign language course or passing a reading examination 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 Department of English website.

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.

Course Offerings

English

ENG 501. Professional Seminar in College Composition. *3 credits.*
Practical examination of the content and methodology of freshman English (GWRTC 103) for the training of beginning teaching assistants. Required for all beginning teaching assistants.

ENG 512. Special Topics Seminar. *3 credits.*
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 595. Graduate Internship in English. *1 credit.*
English graduate student internships. Graduate students identify a prospective employer and work as an intern during the summer, fall or spring semester. Credit may not be applied to program requirements. *Prerequisite: Graduate student status.*

ENG 600. Research Methods. *3 credits.*
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 601. History of Literary Criticism. *3 credits.*
Advanced readings in the nature, function and development of literary criticism, from the classics to modernism (from Plato, Aristotle, and Plotinus to Marx and Freud).

ENG 602. Contemporary Critical Theory. *3 credits.*
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 603. Studies in the History of the English Language. *3 credits.*
Social, cultural, political, and grammatical history of the English language, with attention to changing forms of spoken and written language in terms of phonology, morphology, syntax and semantics.

ENG 604. Contemporary Linguistics. *3 credits.*
Survey of linguistics, with some emphasis on the English language, and of contemporary issues in the application of linguistic theory.

ENG 608. Textuality. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
Medieval literatures in the original or in translation produced between ca. 500-1475 in England, Ireland, 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 credits.*
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 18th-Century British Literature. *3 credits.*
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 19th-Century British Literature. *3 credits.*
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 credits.*
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 credits.*
American literatures of the colonial and early national periods (16th, 17th, and 18th centuries, through ca. 1820). Topics may be determined by period or geography, culture or politics, theme or genre. May be repeated when content varies.

ENG 651. Studies in 19th-Century American Literature. *3 credits.*
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 656. Studies in Latin American Literature. *3 credits.*
Works by Latin American writers in translation. Topics may be determined by period or geography, culture or politics, theme or genre. Although the majority of these writers will be Spanish-speakers, there may also be some coverage of Brazilian literature. May be repeated when content varies.

ENG 662. Studies in 20th- and 21st-Century Literature of the United States. *3 credits.*
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 664. Studies in Drama. *3 credits.*
Dramatic literature and performance, broadly construed. Topics may be determined by period or geography, culture or politics, theme or genre. May be repeated when content varies.

ENG 666. Studies in Film and Media. *3 credits.*
Advanced study of mass media, such as film, broadcast television and radio, and digital media. 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 credits.*
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 credits.*
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 credits.*
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 673. Studies in Caribbean Literature. *3 credits.*
Advanced study of the literary achievement of novelists, poets and dramatists of the Caribbean, with emphasis on diverse theoretical and historical approaches. 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 credits.*
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 credit.*
Continued preparation for the comprehensive examinations. May be repeated as needed.

ENG 699. Thesis Continuance. *2 credits.*
Continued study, research and writing for the thesis. May be repeated as needed.

ENG 700. Thesis. *6 credits.*
Six credits taken over two consecutive semesters. Graded on a satisfactory/unsatisfactory (S/U) basis.

Educational Foundations and Exceptionalities

(540) 568-6193 www.jmu.edu/coe/exed/

Graduate Program Director

Dr. Dannette Allen Bronaugh

Professors

L. Deportes, D. Herr, M. Kyger, S. Wasta

Associate Professors

S. Blatz, T. Thomas

Assistant Professors

D. Allen-Bronaugh, K. Bethune, R. Bosch, M. Cole, K. Kobek, J. Newton

Instructor

L. Schick

Admission Criteria

In addition to The Graduate School qualifications for admissions, potential candidates must meet the following requirements.

Admission criteria and the application process vary with the type of program or an individual's status. Requirements may include:

- GRE or Miller Analogy Test (MAT) with scores at the 25th percentile or higher for the Masters of Arts (M.A.T.) and a GRE score at the 25th percentile or higher for all sections for the Masters of Education (M.Ed.)
- Undergraduate grade point average of 2.75 or higher.
- Baccalaureate degree from a regionally accredited college/university.
- Professional resume.
- Two letters of reference.
- 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.
- Completion of the teacher education application packet. Contact the James Madison University Education Support Center for specific requirements.

The Department of Educational Foundations and Exceptionalities offers Master of Arts (M.A.T.) and Master of Education (M.Ed.) degree programs. The MAT 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, gifted education, special education K-12 accessing the general education curriculum, early childhood special education, inclusive early childhood education, vision impairments, equity and cultural diversity, and teaching English as second language.

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 men and women 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 at James Madison University 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.

Post-Baccalaureate Programs in Special Education

M.A.T. in Special Education

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. Both programs require candidates to 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 2.75 or higher
- Passing scores on Praxis I
- Completion of online application form: http://www.jmu.edu/coe/esc/admissions/
- 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
- Completion of additional requirements for admission to teacher education may be found at http://www.jmu.edu/coe/esc/admissions/.

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.

Fifth Year M.A.T Program

The first (the fifth year program) is a continuation of the undergraduate, pre-professional program in Special Education or Inclusive Early Childhood Education. Alternative criteria to GRE are used for admission to the 5th year M.A.T. programs. In addition, applicants must submit two letters of recommendation (from a cooperating teacher and/or professional who can attest to professional dispositions).

Post-Baccalaureate M.A.T. Program: Initial Licensure Program

The second (initial licensure program) is designed for individuals who already hold a bachelor's degree and are interested in pursuing initial licensure to teach Special Education K-12, Early Childhood Special Education or Visual Impairments. Candidates excepted into the M.A.T. program must be admitted to teacher education at JMU and obtain passing scores on the Praxis I. It is your responsibility to let your adviser know when you have passed Praxis I.

Candidates admitted to this program must have earned a bachelor's degree from a regionally accredited college or university. 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.

Applicants must submit a professional resume, a two-to-three page written statement discussing why they are pursuing a M.A.T., two letters of recommendation (one from an individual who can speak of your potential as a graduate student and another who can comment on your professional

dispositions). Applicants are required to take the GRE or MAT and receive a score in the 25th percentile. Candidates fully accepted into the M.A.T. post-baccalaureate program must be admitted to teacher education and obtain passing scores on the Praxis I. It is your responsibility to let your adviser know when you have passed the Praxis I and met all other conditions to acceptance.

The initial licensure M.A.T. degree program must contain at least 30 credit hours of professional education course work on the graduate level. The total number of credit hours, however, will vary depending upon the educational background of the student. For the K-12 accessing the general education curriculum concentration, 18 additional credit hours of supporting prerequisite courses may be needed, for the ECSE concentration, 15 additional credit hours of supporting prerequisite courses may be needed, and for the vision concentration 12 additional credit hours of supporting prerequisite courses may be needed. 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 needed for unconditional admission to this graduate program and to meet teacher licensure requirements. A comprehensive examination, written and/or oral, will be completed as part of this particular M.A.T. program for the K-12 accessing the general education curriculum and ECSE concentrations. A midpoint and final portfolio will be completed by candidates in the visual impairments concentration.

Teacher Licensure Competencies

These courses may be needed by advisement.

- Human Growth and Development Birth through Adolescence (*G*PSYC 160)
- Foundations of Education (EDUC 300/620)
- Reading (TESL 426/626 or CSD 540 or READ 430)

General Curriculum K-12 M.A.T. Program

Minimum Requirements [1]	Credit Hours
EXED 501. Practicum	2
EXED 502. Nature and Issues of Mild Disabilities	3
EXED 503. Application of Educational Technology for Students with Disabilities	1
EXED 504. Individualized Reading Intervention	3
EXED 510. Individual Behavioral Interventions	3
EXED 520. Differentiation of Instruction and Collaboration in Special Education	3
EXED 607. Programming	3
EXED 610. Practicum in Inclusive Settings	3
EXED 612. Psychoeducational Assessment of Learning and Behavior Problems	3
EXED 613. Teaching Individuals with Learning and Behavior Problems	3
EXED 615. Transition of Learners with Disabilities into New Environments and Functions	3
EXED 650. Student Teaching in Special Education	4
EXED 650. Student Teaching in Special Education	4
Other professional competencies required for licensure (by advisement only)	
READ 566. Literacy Acquisition in Young Readers	
EXED 200/508. Foundations of Exceptional Education	
MIED 530. Teaching Mathematics in the Elementary and Middle Grades	

1 Other courses may be determined by the individual needs of the candidate and approved by the adviser.

Note. 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.

ECSE M.A.T. Program

Minimum Requirements [1]	Credit Hours
EXED 503. Application of Educational Technology for Students with Disabilities	1
EXED 505. Service Delivery Systems in Special Education	3
ECED 508. Observation and Study of Young	3
EXED 509. Nature and Issues of Severe Disabilities	3
EXED 621. Nature and Issues of Early Childhood Special Education	3
EXED 622. Assessment in Early Childhood Special Education	3
EXED 623. Programming in Early Childhood Special Education	3
EXED 625. Medical and Technological Aspects of ECSE	3
EXED 626. Practicum: Infants and Toddlers with Disabilities	3
EXED 627. Practicum: Early Childhood Special Education	3
EXED 650. Student Teaching in Special Education	6
CSD 540. Language Development and Disorders for School Personnel	3
IECE 614. Behavior Intervention for Young Children	3

Graduate elective or research project	3
Other professional competencies required for licensure (by advisement only) [1]	
EXED 200/508. Foundations of Exceptional Education	

1 Other courses may be determined by the individual needs of the candidate and approved by the adviser.

Visual Impairments M.A.T. Program Requirements

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. Refer to http://kihd.gmu.edu/teacher_prep_program/.

Minimum Requirements [1]	Credit Hours
EXED 504. Individualized Reading Intervention	3
EXED 510. Systematic Behavioral Interventions	3
EXED 530. Characteristics of Students with Visual Impairments	1
EXED 531. Assistive Technology for Individuals with Sensory Impairments	2
EXED 532. Braille Code	3
EXED 533. Orientation and Mobility for students with Visual Impairments	2
EXED 534. Curriculum and Assessment for Students with Visual Impairments	3
EXED 601. Collaboration and Supervision to Support Exceptional Learners	3
EXED 615. Transition of Learners with Disabilities into New Environments and Functions	2-4
EXED 632. Braille Reading and Writing	3
EXED 631. Medical and Educational Implications of Visual Impairments	3
EXED 633. Teaching Methods for Students with Visual Impairments	3
EXED 635. Practicum with Students with Visual Impairments	3-6
Electives (by advisement only) [1]	

1 Other courses as determined by the individual needs of the candidate and upon approval of the adviser.

M.Ed. in Special Education

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 a certificate in autism or an endorsement in gifted education.

The M.Ed. is a minimum 30-credit hour program with 13-16 core credit hours. The remaining credits are split between a selected concentration and electives that meet specific individual needs and career objectives. 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.

Although the program is not designed to meet Virginia requirements for teacher licensure or endorsement, the M.Ed. can lead to an additional endorsement in gifted education provided the individual already holds a valid Virginia teaching license. Candidates can also earn a certificate in autism. The final portfolio option has been designed to support candidates who wish to apply for National Board Certification for teaching.

Minimum Requirements	Credit Hours
COE Core Courses	9
EDUC 630. Inquiry in Learning (3 credits)	
EDUC 641. Learning Theories and Practice (3 credits)	
EDUC 642. Curriculum Theory and Issues (3 credits)	
EXED Core	4-7
EXED 605. Trends and Issues in Educational Foundations and Exceptionalities [1]	
Choose one of the following:	3
EXED 608. Educational Foundations and Exceptionalities Portfolio (2-4 credits)	
EXED 609. Research in Educational Foundations and Exceptionalities (1-4 credits)	3
Concentrations	
Students select one of the following concentrations and must completeall courses required	
Gifted Education Concentration (online)	15
EXED 560. Nature and Needs of Learners	
EXED 565. Instructional Methods in Gifted Education	
EXED 570. Practicum in Gifted Education	

EXED 660. Curriculum Design in Gifted Education	
EXED 665. Trends and Issues in Gifted Education	
Autism Concentration	12
EXED 506. Overview and Assessment of Autism Disorders	
EXED 602. Communication, Language and Sensory Issues in ASD	
EXED 603. PBS, FBA and BIP	
EXED 604. Practical Experience in Autism	
Instructional Specialist Concentration (not offered at this time)	
EXED 616. Data Based Decisions	
EXED 617. Strategies for Inclusive Classrooms	
EXED 618. Evidence-Based Instruction and Curriculum Review	
Electives (by advisement only)[2]	0-8
Total Minimum Hours	30

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.

Master of Education (M.Ed) with a Concentration in Behavior Specialist

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.

Master of Education with a Concentration in Behavior Specialist

Degree Requirements	Credit Hours
College of Education Core	6
EDUC 630. Inquiry in Education	
EDUC 641. Learning Theory and Instructional Models	
Educational Foundations and Exceptionalities Core	6
EXED 609. Research in Exceptional Education (twice)	
Electives	3
One approved elective related to a student's specialty area	
Concentration Courses	19
EXED 501. Behavioral Assessment	
EXED 510. Systematic Behavioral Interventions	
PSYC 601. Special Topics: Ethics	
PSYC 610. Applied Behavior Analysis	
PSYC 690. Experimental Analysis of Behavior	
PSYC 805. Single Case	
	34

Fifth Year Programs: M.A.T. Programs

General Curriculum K-12 Program

The undergraduate, special education pre-professional program at JMU complements this professionally oriented master's degree program by providing the requisite course offerings and experiences that form an appropriate foundation for admission to the fifth-year Master of Arts in Teaching (M.A.T.) degree program. Completion of this concentration is required for licensure in Special Education – General Curriculum K-12. Candidates completing this professional licensure program must meet a set of content and endorsement-specific criteria that have been established by the Commonwealth of Virginia. In order to meet these requirements, candidates at the undergraduate level will have completed the Interdisciplinary Liberal Studies (IDLS) major or an approved alternative major concurrently with the pre-professional program at JMU.

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 and demonstrate satisfactory performance at each program evaluation point. Additionally, candidates must meet all graduate admission requirements including satisfactory scores on the Praxis I (to be admitted into the Teacher Education Unit and an undergraduate GPA of 2.75. 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, written and/or oral as approved by the graduate program director will be completed as part of this particular M.A.T. program.

Fifth Year General Curriculum K-12 Program

Minimum Requirements [1]	Credit Hours
EXED 507. Supporting Access to the General Education Curriculum	3
EXED 510. Systematic Behavioral Observations	3
EXED 520. Differentiation of Instruction and Collaboration in Special Education	3
EXED 605. Trends and Issues in Educational Foundations and Exceptionalities	3
EXED 610. Practicum in Inclusive Settings	3
EXED 615. Transitions of Learners with Disabilities into New Environments and Functions	2 - 4
EXED 650. Student Teaching in Special Education	4 - 6
EXED 650. Student Teaching in Special Education	4 -6
EXED 670. Professional Practice Seminar for Special Education	1-3

Inclusive Early Childhood Education

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/IEC.shtml.

Fifth Year Inclusive Early Childhood Education Program Requirements

Minimum Requirements [1]	Credit Hours
IECE 612. Teacher as Decision Maker	3
IECE 613. Practicum	3
IECE 614. Individualized Behavior Intervention for Young Children	3
IECE 620. Teacher as Professional	3
IECE 632. Play & Creativity with Young Children	3
EXED 625. Medical Aspects Impacting Young Children	3
IECE 680. Student Teaching with Young Children (2 experiences, one primary)	12
	30

Post-Baccalaureate Master of Arts in Teaching with a Concentration in 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.

The degree requires the following:

- *G*PSYC 160. Human Development Across the Life Span
- ENG 308. Introduction to Linguistics
- EDUC 300. Foundations of American Education
- READ 366/READ 566. Early Literacy Development and Acquisition (with a 1 credit practicum)
- Foreign language proficiency (6 credits at intermediate level)
- 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 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 2.75 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:

- The Graduate Record Exam (GRE) or Miller's Analogy Test scores at the 25th percentile or higher for both verbal and quantitative sections
- Official transcripts from all colleges or universities attended
- An undergraduate GPA of 2.75 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
- Passing scores on Praxis I

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 and include receipt of satisfactory Praxis I scores. 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 coordinator 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 2.75 or higher
- Passing scores on Praxis I
- Completion of online application form: http://www.jmu.edu/coe/esc/admissions/
- 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 http://www.jmu.edu/coe/esc/admissions/.

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 GPYSC 160, ENG 308, and EDUC 300, READ 366/READ 566 with practicum 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.

Master of Arts in Education with a Concentration in Teaching English as a Second Language Requirements

Degree Requirements	Credit Hours
Professional Education Courses	6
EXED 512. Behavior Management in the Classroom	
EDUC 540. Educational Technology	
TESOL Courses	18
TESL 525. Cross Cultural Education	
TESL 615. Integrated Language and Content Instruction	
TESL 626. First and Second Language Acquisition (corequisite TESL 551)	
TESL 628. Assessment & Curriculum Development for TESOL	
READ 635. Literacy Development and Instruction for English Language Learners (co-requisite TESL 552)	
TESL 680. Instructional Strategies for TESOL	
Licensure Field Experience in TESOL	12
TESL 550. Practicum in TESOL Instructional Strategies	
TESL 551. Practicum in TESOL 1st/2nd Language Acquisition	
TESL 552. Practicum in TESOL Literacy Development	
TESL 681. Student Teaching (2-8 week blocks at PreK-12 levels)	
EDUC 682. Professional Development, Partnership and Advocacy	
Research	3
LTLE 695. Applied Research	
	39

Consult with the academic adviser or Dr. Stephanie Wasta, coordinator of the 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/.

Master of Education (M.Ed) with a Concentration in Equity and Cultural Diversity

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 45-hour 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:

- GRE or Miller's Analogy Test scores at the 25th percentile or higher for both verbal and quantitative sections.
- Undergraduate grade point average of 2.75 or higher.
- Bachelor's degree from an accredited college/university.
- 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 applicant 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 GRE or Miller's Analogy Test scores, official transcripts from all colleges and universities attended, written statement, two professional references, and professional resume.

Master of Education with a Concentration in Equity and Cultural Diversity Degree Requirements

Degree Requirements	Credit Hours
Professional Core	9
EDUC 630. Inquiry in Education	
EDUC 641. Learning Theory and Instructional Models	
EDUC 642. Curriculum Theory and Issues	
Cultural Diversity Core	15
TESL 525. Cross-Cultural Education	
EDUC 620. Changing Contexts in American Schools	
TESL 626. Concepts of 1st/2nd Language Acquisition	
TESL 628. Assessment and Curriculum Development for TESOL	
LTLE 648. Immigration and Education	
Research Requirements (3-6 credits)	3-6
LTLE 695. Applied Research	
or LTLE 700. Thesis	
Electives (6 credits) Selected with an adviser's approval.	6
Examples include:	
EDUC 625. Evaluation in Education, ADSU 641. School Law 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)	
	33-36

Graduate Add-on Programs

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, including those with Asperger syndrome. 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.

Gifted Education

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. The mission of the Gifted Education program is to prepare educators who skillfully contribute to the common good of society through competence in teaching and educational leadership in gifted education. All children are entitled to educators who are knowledgeable, enlightened, and competent, including our advanced and gifted learners. Only competent and knowledgeable educators can provide the necessary environment for the realization of the unique potentials of preK-12 gifted students in all areas of academic, artistic, creative, and intellectual endeavors. Without educational leaders, counselors, teachers, specialists, and all other support personnel gifted learners do not reach their full potentials nor does the greater global society.

Gifted Education Program Requirements

Required Courses	Credit Hours
EXED 560. The Nature and Needs of Gifted Learners	3
EXED 565. Instructional Methods in Gifted Education	3
EXED 660. Curriculum Design in Gifted Education	3
EXED 665. Trends and Issues in Gifted Education	3
EXED 570. Practicum in Gifted Education	3
	15

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.

Course Offerings

Educational Foundations and Exceptionalities

EXED 501. Workshop in Special Education. *3 credits.*
Designed to provide an intensive study of a particular topic in Special Education. *Prerequisite: EXED 200 or permission of instructor.*

EXED 502. Nature and Issues of Mild Disabilities. *3 credits.*
This course will focus on the current research base and professional practices and understandings of the characteristics, and learning and behavioral supports needed for students with high-incidence disabilities who are accessing the general education curriculum, including but not limited to students with: learning disabilities, emotional disturbance, mental retardation, developmental delay, autism, other health impairment, traumatic brain injury and multiple disabilities. Content will include an in-depth exploration of current issues impacting students with high incidence disabilities including: age span issues, emotional and behavioral adjustment, social development, language development, cognitive functioning, medical aspects, and cultural/ethnic and socioeconomic factors. *Prerequisite: EXED 200 or permission of the instructor.*

EXED 503. Application of Educational Technology for Students with Disabilities. *1 credit.*
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. *Prerequisite: EXED 200 or permission of the instructor.*

EXED 504. Literacy Acquisition & Development: Specialized Reading Instruction for Special Needs Students. *3 credits.*
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 Systems in Special Education. *3 credits.*
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 credits.*
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. Supporting Access to the General Curriculum. *3 credits.*
This course is a detailed study of specialized methods in supporting inclusion and access to the general K-12 curriculum for individuals with disabilities. The course emphasizes evidence based instructional approaches that promote successful integration of students with disabilities with their nondisabled peers in a general education classroom. This course will cover procedures to develop, deliver, accommodate, support, and evaluate instructional methods for teaching grade-level content to individuals with disabilities.

EXED 508. Nature and Issues of Exceptionalities. *3 credits.*
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 510. Systematic Behavioral Interventions. *3 credits.*
An application of various systematic behavioral interventions to the management of behavior and learning of individuals with disabilities. Approaches to teach social skills are also addressed.

EXED 512. Behavior Management in the Classroom. *3 credits.*
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 credits.*
This course is designed 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. *Prerequisite: EXED 200, EDUC 310. Students accepted into the SPED pre-professional program will also have prerequisites of READ 430, MAED 430, SPED 484.*

EXED 530. Characteristics of Students with Visual Impairments. *1 credit.*
This course focuses on understanding the nature and issues of visual impairments. It includes overview characteristics of and services to persons with visual impairments, including the impact of visual impairments on infants' and children's growth and development, child and adolescent emotional and social development, and family interaction patterns. It provides a framework for considering the educational, conceptual, psycho-social, and physical implications of a visual impairment. This course is delivered via a distance education format.

EXED 531. Assistive Technology for Individuals with Sensory Impairments. *2 credits.*
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 or corequisite: EXED 435/EXED 530.*

EXED 532. Braille Code. *3 credits.*
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 or corequisite: EXED 435/EXED 530.*

EXED 533. Orientation and Mobility. *2 credits.*
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 and 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 or corequisite: EXED 435/530.*

EXED 534. Curriculum and Assessment of Students with Visual Impairments. *3 credits.*
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 or corequisite: EXED 435/530.*

EXED 541. Low-Tech Assistive Technology. *2 credits.*
This course will focus on functional applications of low-technology solutions within the areas of self-care; mobility and transfer; communication; stability and support; sports, recreation, and leisure; and academic and work environments. The course will include exploration and opportunities to design and create low-tech devices for children and adults. *Prerequisites: EXED 300 or EXED 503.*

EXED 542. Assistive Technology Computer Applications. *3 credits.*
This course is designed to enhance students' awareness and understanding of computer technology and its implications for individuals with disabilities. It will examine the accessibility of standard computer hardware and software as well as explore available assistive technologies designed to enhance computer accessibility and the functional capabilities of individuals with disabilities. Laboratory and demonstration experiences will enable students to better utilize devices and software in a variety of settings. *Prerequisites: EXED 300 or EXED 503, and EXED 441 or EXED 541, or permission of the instructor.*

EXED 543. Use of Assistive Technology in Instruction for Individuals with Disabilities. *2 credits.*
This course is designed to enhance students' awareness and understanding of the range of assistive technologies available and their instructional implications for individuals with disabilities. Laboratory and demonstration experiences will enable students to select and utilize devices and software in settings serving individuals with disabilities. *Prerequisites: EXED 300 or EXED 503.*

EXED 560. The Nature and Needs of Gifted Learners. *3 credits.*
The 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 credits.*
This 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. *Prerequisite: EXED 560.*

EXED 570. Practicum in Gifted Education. *3 credits.*
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 groped (mixed ability) classroom or a homogeneously grouped (single ability) classroom. *Prerequisites: EXED 560, EXED 565, EXED 660 and EXED 665.*

EXED 600. Instructional Methods in Special Education. *3 credits.*
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. *Prerequisite: EXED 475; Corequisite: EXED 610.*

EXED 601. Collaboration And Supervision To Support Exceptional Learners. *3 credits.*
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. *Prerequisite: EXED 200 or equivalent.*

EXED 602. Communication, Language and Sensory Issues of Autism. *3 credits.*
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. We will review learning characteristics, current research and factors involved with causation, assessment and diagnosis, and positive behavioral supports to set the stage. The bulk of our time will be spent exploring social skills 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 is the first course in the autism certificate program. *Prerequisite: EXED 506.*

EXED 603. Challenging Behaviors, Positive Behavioral Supports, Functional Behavior Assessment and Behavioral Intervention Plans. *3 credits.*
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 Behavioral 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. *Prerequisites: EXED 506 and EXED 602.*

EXED 604. Practical Experience in Autism. *2 credits.*
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 Behavioral 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. *Prerequisites: EXED 506, EXED 602 and EXED 603.*

EXED 605. Trends and Issues in Exceptional Education. *3 credits.*
This course investigates current issues and controversies in the field of exceptional education. This course is designed to support student's 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. Curriculum and Methods in Special Education. *3 credits.*
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. *Prerequisites: EXED 502 and prerequisite/corequisite EXED 612 or permission of the instructor.*

EXED 608. Portfolio in Exceptional Education. *2-4 credits.*
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. *1-4 credits.*
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. *3 credits.*
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. *Corequisite: EXED 507. Prerequisite: EXED 520.*

EXED 612. Psychoeducational Assessment of Learning and Behavior Problems. *3 credits.*
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 credits.*
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. *2-4 credits, repeatable twice.*
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. *Prerequisites: EXED 200/508 and EXED 341/502 or instructor's approval.*

EXED 616. Data-Based Decision Making. *3 credits.*
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. *Prerequisites: EDUC 630.*

EXED 617. Strategies for Inclusive Classrooms. *3 credits.*
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. *Prerequisites: EXED 616.*

EXED 618. Evidence-Based Practices. *3 credits.*
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. *Prerequisites: EXED 616.*

EXED 621. Issues and Trends in Early Childhood Special Education. *3 credits.*
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 credits.*
(Cross-listed as PSYC 822). 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. *Prerequisites: Permission of instructor or EXED 502.*

EXED 623. Programming in Early Childhood Special Education.*3 credits.*
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. *Prerequisites: EXED 622 or permission of instructor.*

EXED 625. Medical and Technological Aspects of Early Childhood Special Education.*3 credits.*
This course is designed to give the early childhood special educator exposure to working with children with medical disabilities, ages 0 to 5, who may have significant medical complications. The role and function of early childhood special educators as team members are addressed. The role of technology will receive extensive attention as will issues of etiology and remediation. *Prerequisites: EXED 200 and permission of instructor.*

EXED 626. Practicum: Infants and Toddlers with Disabilities.*3 credits.*
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/corequisite: EXED 623.*

EXED 627. Practicum: Early Childhood Special Education. *3 credits.*
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/corequisite: EXED 623.*

EXED 631. Medical and Educational Implications of Visual Impairments. *3 credits.*
This course provides and 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. *Prerequisites: EXED 530.*

EXED 632. Braille Reading and Writing. *3 credits.*
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. *Prerequisites: EXED 435/530 and EXED 432/532.*

EXED 633. Teaching Methods for Students with Visual Impairments. *3 credits.*
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. *Prerequisites: EXED 435/530.*

EXED 635. Practicum with Students with Visual Impairments. *3-6 credits.*
This practicum is designed to provide students with direct experiences related to teaching students with visual impairments. Students will administer assessments, plan curriculum, offer Braille instruction, and utilize teaching methods and technology unique to students with visual impairments. Settings include inclusive and self-contained settings for students with visual impairments. Students are expected to demonstrate competencies developed in related course work. This practicum can be repeated. *Corequisites: EXED 434/534, EXED 632 and EXED 633.*

EXED 650. Student Teaching in Special Education. *6-12 credits.*
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. *3-6 credits.*
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 credits.*
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. *Prerequisite: EXED 560.*

EXED 665. Trends and Issues in Gifted Education. *3 credits.*
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. Specific topics include: collaboration between gifted and general education; the psycho-social adjustment and guidance of gifted learners; the plight of underserved populations of gifted learners; educational programming models for gifted education; and the approaches used to measure and assess giftedness. *Prerequisite: EXED 560.*

EXED 670. Professional Practice Seminar for Special Education. *1-3 credits, repeatable twice.*
Designed to accompany SPED 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. *Corequisite: EXED 650. Prerequisite: EXED 605 or permission of the department.*

EXED 680. Reading and Research. *1-6 credits.*
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 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

Teaching English as a Second Language

TESL 525. Cross Cultural Education. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credit.*
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 credit.*
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 READ 635 course.

TESL 553. Practicum in Literacy Development. *1 credit.*
This practicum has pre-service teachers work directly with students in grades PreK-12 (as determined by the READ 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 READ 566 course. Most pre-service teachers will assist PreK-5 students.

TESL 570. Instructional Strategies for Teaching English as a Second Language. *3 credits.*
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. For ESL minors who are enrolled in a teacher licensure program. *Prerequisites: All required TESL courses.*

TESL 615. Integrated Language and Content Instruction. *3 credits.*
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 credits.*
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 credits.*
The course provides students with a variety of assessment practices for profiling non-native students' abilities and for developing appropriate curriculum.

TESL/READ 630. Development, Assessment and Instruction of Literacy, K-12.*3 credits.*
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 credits.*
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 credits.*
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. *Prerequisites: EXED 512, EDUC 540 and TESOL courses.*

Health Sciences

Department of Health Sciences

(540) 568-6510 www.healthsci.jmu.edu/

Academic Unit Head

Dr. Allen Lewis

Graduate Program Director – Dietetics and Nutrition and Physical Activity

Dr. Jeremy Akers, R.D.

Graduate Program Director – Physician Assistant Studies

Mr. Gerald Weniger, PA-C, ATC

Graduate Program Director – Occupational Therapy

Dr. Amy Russell Yun

Professors

J. Gloeckner, R. Koslow, P. Maxwell, J. Thompson, D. Wenos, M. Wessel

Associate Professors

P. Bailey, D. Cockley, B.K. Diduch, J. Frye, K. Lewis, G. Polacek, D. Sutton, D. Torisky

Assistant Professors

J. Akers, E. Kancler, K. Liskey, S. Maiewski, C. Peterson, M. Rittenhouse, G. Weniger, J. Wenos, A. Russell Yun

Instructor

E. Richardson

Admission Requirements

Admission requirements for programs in the Department of Health Sciences vary by program. Refer to the specific program for admission criteria and deadlines.

Mission

The graduate programs in health sciences 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.

Overview of Programs

The Department of Health Sciences is home to three graduate programs: M.S. in health sciences with a concentration in either dietetics or nutrition and physical activity; M.O.T. in occupational therapy; and M.P.A.S. in physician assistant studies.

Master of Science Concentrations

Health Sciences: Dietetics Concentration

Graduate Program Director: Dr. Jeremy Akers (540) 568-8974

This program is not accepting new students for the 2014-15 academic year. Check with 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 credential.

Dietetics Concentration Degree Requirements

Minimum Requirements	Credit Hours
MATH 522. Statistics for Researchers	3
NUTR 654. Current Topics in Foods	3
NUTR 655. Integrated Nutrition	3
NUTR 660. Research Methods in Dietetics	3
NUTR 672. Professional Practice Issues in Dietetics	3
Choose one of the following options:	6-7
Directed Research option:	
NUTR 681. Directed Research in Dietetics I (two credits)	
NUTR 682. Directed Research in Dietetics II (two credits)	
NUTR 695. Research Interpretation in Dietetics (one credit)	
NUTR 696. Graduate Seminar in Dietetics (one credit)	
Thesis option:	
NUTR 700. Thesis Research I (three credits)	
NUTR 701. Thesis Research II (three credits)	
NUTR 695. Research Interpretation in Dietetics (one credit)	
NUTR 696. Graduate Seminar in Dietetics (one credit)	
Choose 12 hours from the following elective courses:	12
NUTR 545. Nutrition and Exercise	
NUTR 555. Theories and Practices of Weight Management	
NUTR 650. Nutrition Education and Counseling	
NUTR 671. Nutrition in Disease Development, Progression and Prevention	
NUTR 673. Advanced Management in Dietetics	
NUTR 674. Optimal Nutritional Health for Older Adults	
NUTR 675. Nutrigenomics	
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Health Sciences: Nutrition and Physical Activity

Graduate Program Director: Dr. Jeremy Akers (540) 568-8974

This 33 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.

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 RD status recognized by the Academy of Nutrition and Dietetics; however, students are encouraged to obtain the RD status by completing the Didactic Program in Dietetics requirements and applying for a dietetic internship.

Refer to www.healthsci.jmu.edu/dietetics/undergraduate.htm for a list of DPD requirements; refer to www.eatright.org for a list of all dietetic internships available in the United States.

Nutrition and Physical Activity Concentration Degree Requirements

Minimum Requirements	Credit Hours
NUTR 555. Theories and Practices of Weight Management	3
KIN 644. Metabolic and Cardiorespiratory Aspects of Exercise	3
KIN 645. Muscular, Hormonal and Environmental Aspects of Exercise	3
KIN 650. Exercise Testing, Prescription and Evaluation	3
NUTR 660. Research Methods in Dietetics	3
MATH 522. Statistics	3

NUTR 545. Nutrition and Exercise	3
NUTR 582. Nutrition and Metabolism	3
NUTR 652. Nutrition Assessment	3
Choose one of the following options:	6-8
Option One:	
NUTR 695. Research Interpretation in Dietetics (1 credit)	
NUTR 696. Graduate Seminar in Dietetics (1 credit)	
NUTR 700. Thesis Research I (3 credits)	
NUTR 701. Thesis Research II (3 credits)	
Option Two:	
NUTR 681. Directed Research in Dietetics I (2 credits)	
NUTR 682. Directed Research in Dietetics II (2 credits)	
NUTR 695. Research Interpretation in Dietetics (1 credit)	
NUTR 696. Graduate Seminar in Dietetics (1 credit)	
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Course Offerings

Health Sciences

HTH 501. Workshop in Health and Nutrition. *1-3 credits.*
An intensive investigation of a major current health problem such as sex education, drug abuse or environmental health.

HTH 510. Human Sexuality. *3 credits.*
Components of human sexuality as they relate to the physical, social and emotional health of children, adolescents and adults. Such topics as physical and sexual changes during adolescence, abortions and contraceptives are discussed.

HTH 549. Contemporary Health Issues. *3 credits.*
An investigation of concerns in the area of health promotion, including cardiovascular health, fitness, the personal role of health education, drugs and drug abuse, and other selected topics.

HTH 552. Health Behavior: Theory, Research and Practice. *3 credits.*
An in-depth analysis of health education strategies employed in altering individual and community health behavior.

HTH 558. Health Planning. *3 credits.*
An intensive exploration of resources and techniques employed in planning and evaluating health programs designed to meet the specific health needs of communities and groups.

HTH 645. Practicum in Health Sciences. *1-3 credits.*
Selected practicum experiences for students in the various health sciences graduate programs.

HTH 655. Research Techniques. *3 credits.*
This course examines: the focus of research, literature review, research design, choices of method of analysis, data collection techniques and the various ways to conclude a research effort. The logic of statistical analysis is used to develop research designs. *Prerequisite: One statistics course.*

HTH 657. Chronic Diseases. *3 credits.*
Survey of common chronic diseases of humanity with emphasis on prevention and early diagnosis. Topics include such diseases as cardiovascular, endocrine, ophthalmic, respiratory and neurological disorders.

HTH 659. Health Care Environment. *3 credits.*
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 660. Health Economics. *3 credits.*
Course explores economic dimensions of the health care delivery system: demand, demand-related human behaviors, competitive markets, economic models for care delivery, regulation and medical insurance. Delivery models of other industrialized nations are considered, as is how the U.S. system may be improved. *Prerequisite: Undergraduate microeconomics.*

HTH 661. Financial Management of Health Services Organizations. *3 credits.*
This course emphasizes financial management in a variety of health care organizations. Activities include the study of patient accounting, third party reimbursement and cost reporting. There will be extensive use of microcomputer spreadsheet methods. *Prerequisites: Required: HTH 659; recommended: FIN 645.*

HTH 669. Modern Health Care Administration. *3 credits.*
Study of health organizations' internal operations through examination of activities in various health agency settings.

HTH 671. School Health Practice. *3 credits.*
Analysis of two areas of the school health program (health services and health instruction) with emphasis on planning, implementing and evaluating health services and instruction.

HTH 680. Reading and Research. *3 credits.*
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. *3-6 credits.*
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 695. Directed Research. *3 credits.*
This is for research designed to complete the Directed Research Option. The course must be taken twice. *Prerequisite: Permission of graduate coordinator.*

HTH 698. Comprehensive Continuance. *1 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

HTH 699. Thesis Continuance. *2 credits.*
Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

HTH 700. Thesis Research. *6 credits.*
This course is graded on a satisfactory/unsatisfactory (S/U) basis. *Prerequisite: HTH 655 or equivalent.*

Dietetics

NUTR 545. Nutrition and Exercise. *3 credits.*
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 credits.*
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. *Prerequisites: BIO 270, BIO 290, NUTR 280 or permission of instructor.*

NUTR 582. Nutrition and Metabolism. *3 credits.*
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. *Prerequisites: NUTR 280, physiology, biochemistry and statistics.*

NUTR 650. Nutrition Education and Counseling. *3 credits.*
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 credits.*
Methods of assessing nutritional status of people in clinical and experimental settings. *Prerequisite: NUTR 384 or equivalent.*

NUTR 654. Current Topics in Foods. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 healthcare; 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 674. Optimal Nutritional Health for Older Adults. *3 credits.*
Students will investigate physiological changes associated with normal aging, the impact of those changes on nutrition status, and the impact of nutrition on the longevity and quality of life. Evidence-based treatment modalities to minimize the effects of physical, social, economic and mobility changes on nutritional health will be developed. *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 credits.*
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 diseases 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 credits.*
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 adviser if content changes. *Prerequisite: Permission of adviser.*

NUTR 681. Directed Research in Dietetics I. *2 credits.*
Advanced research in dietetics directed by a graduate advisory committee. Course will be graded on an S/U basis. *Prerequisites: Unconditional admission status in the graduate program and NUTR 660.*

NUTR 682. Directed Research in Dietetics II. *2 credits.*
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. *3-6 credits.*
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 credit.*
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 credit.*
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. *Prerequisites: NUTR 695, NUTR 660, NUTR 681, MATH 522; prerequisite or co-requisite: NUTR 682 or NUTR 701.*

NUTR 697. Directed Research Continuance. *1 credit.*
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 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

NUTR 700. Thesis Research I. *3 credits.*
Advanced research in dietetics directed by a graduate advisory committee written in traditional thesis format. Course will be graded on an S/U basis. *Prerequisites: Unconditional admission status in the graduate program, NUTR 660, and permission of adviser.*

NUTR 701. Thesis Research II. *3 credits.*
Advanced research in dietetics directed by a graduate advisory committee written in traditional thesis format. Course will be graded on an S/U basis. *Prerequisites: Unconditional admission status in the graduate program, NUTR 700, and permission of adviser.*

History

History Department
(540) 568-6132 www.jmu.edu/history

Academic Unit Head
Dr. Gabrielle Lanier

Graduate Program Director
Dr. Philip D. Dillard

Professors
J.C. Arndt, J. Butt, M. Galgano, S. Guerrier, R. Hyser, G. Lanier, D. Owusu-Ansah, S. Reich, M. Seth

Associate Professors
K. Borg, L.S. Chappell, J. Davidson, P. D. Dillard, M. Gayne , H. Gelfand, M. Gubser, S. Hanifi, K. Hardwick, L. King, K. McCleary, R. Meixsel, M. Mulrooney, W. Van Norman, A. Sandman

Assistant Professors
R. Brannon, C. Davis, T.J. Fitzgerald, E. Friss, M. Galmarini, Y. Hu, E. Westkaemper, A. Witmer

Adjunct Professor
C. Hallman

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, the Department of History requires applicants to its 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 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.

Students seeking admission to the Master of Arts with teaching licensure must contact the School of Education.

The Department of History offers the Master of Arts degree with a major in history.

Application Deadlines

Complete applications must be received by **February 1**. 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 February 1 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, or local/regional/public history. It permits students to deepen their understanding, acquire knowledge and develop critical skills necessary for advanced research and writing in history. Through a blend of courses and internships, the program enhances levels of professional competence that demand mastery of the techniques of research, critical thinking, and careful oral and written communication. Graduates of the program are able to demonstrate an ability to understand and perform scholarly research with cross-disciplinary perspectives. We see this as essential since it provides important skills designed to meet the changing needs of our students in society.

To ensure that our mission is kept in focus, we require graduates to demonstrate an advanced knowledge in their specific areas of study.

These often interrelated goals are achieved through coherent, orderly programs of study encompassing investigation and/or supervised practical experience. As part of a comprehensive university supported by public funds, the graduate program in history is committed to serving the needs of the Commonwealth of Virginia and the region. The Department of History's graduate program encourages students to develop strengths in critical and creative thinking, communication and applied skills. A balanced combination of theoretical and practical studies prepares the successful graduate for advancement in the workplace, future educational opportunities, informed participation in today's increasingly more complicated society and leadership in community affairs.

The graduate program in history serves multiple audiences. Since historians today practice their discipline in a variety of careers, we offer a concentration in local/regional/public history. The concentration exposes students to the broad range of skills and issues associated with public history while providing them with a solid advanced background in history. Students also augment their academic training through internships in a range of public history settings including museums, archives, government agencies, libraries, historic preservation organizations, businesses, contract history firms, cultural resource management firms and historic sites.

The Department of History's graduate program actively supports all university and college goals and objectives.

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 the second year of a college course in a modern foreign language with a grade of "C"; or above or successful completion of a reading examination approved by the history department in a modern foreign language
- Completion of a thesis for six credit hours
- Successful completion of a comprehensive examination in one of the three fields of concentration

The program offers an opportunity for concentration in three fields of history:

- 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 (or its equivalent)

HIST 671. Seminar in Historical Research Methods

First Year, Spring Semester
HIST 673. Graduate Research and Writing Seminar

Second Year, Fall Semester
HIST 700. Thesis

Second Year, Spring Semester
HIST 700. Thesis

Course Offerings

History

HIST 502. Workshop in Colonial American Life. *3 credits.*
This workshop is a study of life in colonial Virginia. Through the use of primary and secondary sources, the students research and 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 credits.*
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 credits.*
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 513. The Anglo-American Constitutional Tradition. *3 credits.*
Surveys Anglo-American political and constitutional traditions. Emphasizes the evolution of 17th- and 18th-century British constitutionalism, its transferal to the British North American colonies and the development of the first national and state constitutions in the United States. Emphasis on historiography and study from primary sources.

HIST 520. U.S. History, 1763-1800. *3 credits.*
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 credits.*

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 and Reconstruction. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
An interpretive study of U.S. 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 credits.*
An interpretive study of U.S. 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 tends will be emphasized in this seminar.

HIST 543. Modern American Technology and Culture. *3 credits.*
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. Topically, 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 555. Global Political and Social Thought to Early Modern Times. *3 credits.*
Seminar in examining and analyzing political and social theory from different cultures though the 18th century with emphasis on historiographical interpretation.

HIST 560. Modern Japan. *3 credits.*
A study of Japanese history from around the mid-19th century to the present. Major topics include the Tokugawa Shogunate, the Meiji Restoration, the rise of militarism, the Pacific War, the occupation of Japan and the new Japan. In depth analysis of the above topics through historiographical approach. Additional assignments.

HIST 561. Advanced Seminar in Marxist-Leninist Theory in Modern Global History. *3 credits.*
Advanced examination and analysis of Marxist-Leninist theory and its impact; analytical study of the main Marxist texts and historiography.

HIST 562. The Rise and Fall of Nazi-Germany, 1918-1945. *3 credits.*
An advanced study of the period of Nazi domination in Germany covering the Weimar Republic, the rise of the NSDAP, the Third Reich and World War II. The nature of totalitarianism, the character of Adolf Hitler and the general Weltanschaaung of Germany under the Third Reich are emphasized. Students will consider primary and secondary sources and must demonstrate command of the historiography.

HIST 563. Tudor-Stuart England. *3 credits.*
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 and Reformation. *3 credits.*
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. Students must demonstrate command of the historiography.

HIST 566. The Family, 1400-1800. *3 credits.*
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 credits.*
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 credits.*
The 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 credits.*
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 credits.*
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 580. Modern China. *3 credits.*
An in-depth study of Chinese history since 1840, with particular emphasis on China's response to the West, the demise of imperial China, abortive experiments in republicanism, the origin and evolution of Chinese Communism under Mao and after Mao's death. The historiography of seminal figures and events will be emphasized.

HIST 581. Early Modern Europe: The New Worlds of Exploration and Science. *3 credits.*
A study of the major changes in world view brought on by exploration and science in the 15th, 16th and 17th centuries in Europe. Attention is given to the causes of each movement as well as the individuals and the technology involved. Students must demonstrate command of the historiographical sources.

HIST 583. Baroque and Revolutionary Europe, 1648-1815. *3 credits.*
This course examines the old regime, its institutions, the causes of popular revolts, the enlightenment, the beginnings of industrialism and the impact of the French Revolution upon Europe. Analysis of texts, the historiography of major figures and seminal events, and the interpretation of major debates and historiographical trends will be emphasized.

HIST 584. 19th-Century European Civilization, 1815-1914. *3 credits.*
An interpretive study of European history (and the historiography devoted to the period) from the Congress of Vienna to the outbreak of World War I. Particular attention is given to the intellectual climate of the period, with emphasis on liberalism, nationalism, socialism and nihilism.

HIST 585. Colonialism in the Greater Middle East. *3 credits.*
A survey of the special problems which have beset the Arab Middle East since World War II. Special emphasis will be given to Palestinian nationalism and to the PLO, to the origins of civil conflict in Lebanon, to Iraqi and Syrian Baathism, and to the revival of Islamic fundamentalism.

HIST 586. Europe Since 1914. *3 credits.*
An interpretive study of European history (and the major interpreters of that history) from World War I to the Cold War, with special emphasis on the revolutions of 1917-1919, the rise of totalitarianism, the origins of the World War II, the Cold War and its aftermath, and the continuing crisis of values.

HIST 587. World War II. *3 credits.*
This course examines World War II in Europe and in Asia. The major military campaigns are discussed, as are collaboration, resistance and the war crimes trials. Analysis of texts, the historiography of major figures and seminal events, and the interpretation of major debates and historiographical trends will be emphasized.

HIST 590. Special Topics in History. *3 credits.*
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. See MyMadison for topic and professor. *Prerequisite: Permission of department head.*

HIST 591. Editing Historical Documents. *3 credits.*
A seminar in the techniques of analyzing manuscript collections in order to create an edition of historical documents. Both the theory and methodology of documentary editing will be emphasized, including collection, selection, transcription, annotation, proofing, illustration, indexing and publication. Software tools and issues will be considered.

HIST 592. American Material Culture. *3 credits.*
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 credits.*
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 594. Introduction to Museum Work. *3 credits.*
A study of the philosophy and practice of museum work. Emphasis on museum administration, conservation, exhibition and education. Provides background for internships and employment in the field. Students undertake a focused research project as well as leadership assignments for class projects.

HIST 595. Introduction to Archives and Manuscripts. *3 credits.*
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.

HIST 597. Genealogical Research and Family History. *3 credits.*
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 state of the semesters.

HIST 600. Seminar in U.S. History: Early Period. *3 credits.*
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. *1-3 credits.*
Intensive study of topics of current interest and demand. Primarily designed for history and social studies teachers. 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 605. Seminar in U.S. History: Recent Period. *3 credits.*
A topical approach to the study of recent U.S. history. Topics might include American science and technology, industrialism, 20th-century diplomacy, black nationalist thought, 20th-century American military history, or any pertinent topic falling within the post-1865 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 610. Seminar in European History: Early Period. *3 credits.*
A topical approach to the study of early European history. Topics might include ancient history, medieval Europe, Tudor-Stuart England, renaissance and reformation, the era of the French revolution, or any pertinent topic falling within the pre-1815 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 615. Seminar in European History: Recent Period. *3 credits.*
A topical approach to the study of recent European history. Topics might include Europe in the 19th century, Europe between the World Wars, Europe during the Cold War, Russia or any pertinent topic falling within the post-1789 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 637. Practicum: Selected Topics in Local and Regional History. *3 credits.*
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 credits.*
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. Graded S/U. *Prerequisite: Permission of department head.*

HIST 650. Seminar in World History. *3 credits.*
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 credits.*
This course provides an introduction to the historiography and research methods of world history. Emphasis is on integrating local and regional studies into a larger framework of world/global history utilizing the themes and methodological approaches that have been developed by the major contributors to this subfield of history.

HIST 656. The Global Economy and Nationalism. *3 credits.*
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 credits.*
Systematic presentation of the theories and approaches to historical research, including detailed analysis of historiography past and present. Required of all first year graduate students.

HIST 673. Graduate Research and Writing Seminar. *3 credits.*
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 credits.*
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, occasional field trips and an extended public history research project.

HIST 698. Comprehensive Continuance. *1 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

HIST 699. Thesis Continuance. *2 credits.*
Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

HIST 700. Thesis Research. *6 credits.*
This course is graded on a satisfactory/unsatisfactory (S/U) basis.

Integrated Science and Technology

Department of Integrated Science and Technology
(540) 568-2789 http: //msisat.jmu.edu/index.html

Academic Unit Head
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Graduate Program Director
Dr. Maria Papadakis

Professors
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Associate Professors
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Assistant Professors
M. Benton, R. Brent, N. Radziwill, J. Wilson

Instructor
K. Newbold

Admission Criteria

The program seeks a diverse student body with grounding in basic science, engineering, mathematics, economics, political analysis, sociology, or international relations and experience in industry, government or international development. The expectation is that the applicant will 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, preferably related to science and technology at the undergraduate level. Work experience can be substituted for academic experience. Hence, admission to the program may be granted to students with a variety of undergraduate majors in areas such as the physical sciences, computer science, selected areas of education, engineering, operations research, and information and decision sciences.

Admission decisions will be collectively based on the following considerations:

- Graduation from a regionally accredited college or university.
- Undergraduate grade point average.
- Test scores from Graduate Record Exam (GRE), Graduate Management Admissions Test (GMAT), Medical College Admission Test (MCAT) or Miller Analogy Test (MAT).
- Official transcripts from all colleges or universities attended.
- Industrial, business, government or educational experience as indicated by current vita.
- At least two letters of recommendation.
- An original essay of 1-2 pages discussing your academic and career goals and how the ISAT program will prepare you for achieving them.

Admission in the fall term is strongly encouraged. All parts of your application should be submitted electronically, using the online application submission system.

The Master of Science in Integrated Science and Technology in Harrisonburg is not accepting students for the 2014-15 academic year. Applications are being accepted for the program offered jointly with the University of Malta.

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 experience that facilitates in-depth knowledge and skills across a variety of integrated scientific and technological disciplines utilizing a systems approach.

Among the unique characteristics of the program are:

- the curriculum and teaching methods are in constant touch with the realities of the world of work.
- the curriculum is aimed at developing graduates with strong collaborative and communicative skills.
- the graduates are skilled in information technology and knowledge management tools that are applicable to a broad range of professional careers.
- the curriculum and graduates are flexible and amenable to change in order to remain current with the nation's developing critical technologies and with the imperatives of a changing national economy.
- the graduates solve technologically-based problems from a systems perspective, including the consideration of non-technological aspects such as politics, economics, and ethics.

The program's sequence of core and elective courses leads to the Master of Science degree in integrated science and technology. The program builds a solid foundation in applied science and technology with a distinct theme in systems. Students acquire quantitative tools for applied systems analysis and design and for the management of technological issues encountered in contemporary professional practice. The curriculum stresses the use of computers for modeling and simulation, for the management of information and technology and for research methodology. The curriculum is unique in its incorporation of social, legal and political aspects of science and technology.

Students focus on selected areas of science and technology with practical, in-depth exposure to the size and complexity of contemporary problems. Depth will be provided through thesis or project study in one of several strategic technology areas distilled from the national critical technologies. These areas include biotechnology, information technology, manufacturing, energy and the environment. Such a class of graduates:

- apply a breadth of knowledge and skills across a variety of scientific and technological disciplines;
- effectively use formal training in collaborative and leadership methods;
- employ problem solving techniques from many disciplines and use of the computer as a problem solving tool; and
- integrate scientific and technological factors with political, social, economic and ethical considerations in problem solving.

By developing a systems approach to problem solving, the graduate will be skilled in identifying and capitalizing on the fact that most problems encountered in business or government are inherently systems problems. Characteristics of such systems involve complex interplay of technical, social, political, regulatory, and business issues; multiple, interdependent groups, units, or organizations working in coordination with sometimes conflicting needs; rapid flow of information between individuals and groups; multi-step processes for making products or decisions with ample opportunity for feedback and bottlenecks; and numerous local random events and disturbances that profoundly affect the performance of the overall system.

Entrance, Continuation and Exit Requirements

Prospective students should familiarize themselves with the ISAT program, and the university, the college, ISAT and the ISAT master's curriculum. Accepted students should attend the orientation provided by the Graduate School, and arrive on campus in time to take care of ID cards, tuition payments and registration, and orientation. Graduation requires successful completion of 30 graduate credit hours in a sequence approved by the student's graduate adviser with a GPA of 3.0 or better and with no more than six credit hours of "C's." Time limitations for completion of the program, continuous registration and thesis preparation will follow guidelines from The Graduate School.

Master of Science in Integrated Science and Technology

The 30-credit hour Master's of Science curriculum consists of 15 credit hours of common core courses followed by 15 credit hours of elective courses tailored to the individual course of study. The core component 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.

As part of the curriculum, students will be required to complete a six-credit thesis. This thesis can be theoretical or practical will require students to demonstrate their mastery of an integrated approach to scientific and technological issues. It may involve research, social analysis, evaluation of potential solutions, and/or design implementation.

The Master of Science in Integrated Science and Technology in Harrisonburg is not accepting students for the 2014-15 academic year.

Curriculum Components and Details

The 30 credit-hour curriculum for the master's of science degree in integrated science and technology includes a 12-15 credit core program consisting of four to five courses in integrated science and technology; 12 graduate elective credits approved by the adviser, and six credits of thesis research.

Degree Requirements

Minimum Requirements	Credit Hours
ISAT 510. Foundations in Integrated Science and Technology[1]	3
ISAT 610. Social Context of Science and Technology	3
ISAT 620. Introduction to Systems Dynamics	3
ISAT 630. Computer Modeling and Simulation	3
ISAT 640. Information and Technology Management	3
Approved electives	12
ISAT 700. Thesis	6
	30-33

1 The first core course, ISAT 510, is intended for students requiring additional preparation in science, its methods and multidisciplinary problem solving.

As part of the strategic focus area, the student will be required to complete a six-credit thesis This thesis will involve research, investigation or development undertaken by students individually and/or as part of project teams.

To complete the program in one year, students must accomplish two, 12-hour semesters which represents a course overload. A student would complete two core courses and two electives per semester. Six hours of thesis, (ISAT 700), will be completed in the summer following the second semester.

Sustainable Environmental Resources Management

A version of the ISAT master's degree is also offered jointly with the University of Malta. This thirteen-month program is offered entirely in Malta and includes the core program of four courses along with a defined set of electives. Students who complete the master's program in Malta will also earn a master's in sustainable environmental resources management from the University of Malta. This program is taught by faculty from both JMU and the University of Malta and includes study abroad travel. Additional information is available from the SERM website.

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.

Course Offerings

Integrated Science and Technology

ISAT 510. Foundations in Integrated Science and Technology. *3 credits.*
This course introduces the student to the fundamental concepts of science and the methodologies required for using an integrated problem-solving approach in the technical area. ISAT graduates are ineligible.

ISAT 511. Quantitative Methods for Systems Analysis. *1-3 credits.*
This 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 515. Energy Systems. *3 credits.*
This course will present an overview of energy generation and distribution technologies that are in use or under development. Selected technologies will be covered in detail including the underlying scientific principles. In addition, students will study tools and techniques used to measure, control and analyze energy consumption.

ISAT 525. Environmental Systems. *3 credits.*
This course covers the basics of environmental pollution, processes, and control technologies. Three major areas of environmental concern (air, water and waste) are addressed. Environmental risk and decision making are discussed. Topics are presented in an integrated manner in the context of the regulatory programs. Participation in environmental projects such as impact assessment, site remediation, water quality management, air quality monitoring are required.

ISAT 528. Industrial Ecology. *3 credits.*
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 530. Manufacturing Systems. *3 credits.*
This course covers systematic and analytical treatment of manufacturing systems to identify opportunities for improving existing systems, to design more effective systems and to improve decision-making processes in manufacturing. Topics include manufacturing systems; tools for automation and integration in manufacturing; automated process planning; technology change and strategies for implementing new technologies; and others.

ISAT 540. Information and Technology Management Systems. *3 credits.*
This course focuses on the representation, manipulation, storage, and retrieval of data, information and knowledge from both a historical and contemporary perspective. Students will be introduced both to programming skills and also to introductory concepts in database design and development. The course will stress aspects of data quality, privacy, and security.

ISAT 545. Applications if GIS for Resource Management. *3 credits.*
This course focuses of 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 550. Biotechnology Systems. *3 credits.*
This course is an intensive survey of the scientific foundations of biotechnology. Specific topics include the history, theory, and applications of recombinant DNA technology, genetic engineering, transgenic organisms, and the role of biotechnology in society.

ISAT 551. Bioinformatics. *3 credits.*
The amount of DNA sequence data being collected today is increasing rapidly. The student will learn, through lectures and hands-on laboratory exercises, a compendium of algorithms that can search for sequence similarities, create alignments for finding consensus sequences, model three-dimensional structures and more. *Prerequisites: ISAT 340, ISAT 351, and ISAT 454 (or their equivalents), or permission of the instructor (requires knowledge of Molecular Biology and database technology).*

ISAT 560. Complex Systems and How They Fail. *3 credits.*
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 565. Case Studies in Sustainability: Energy. *2 credits.*
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 Water. *2 credits.*
This course focuses on the exploration and analysis of case studies in the development of sustainable air and water policies and practices around the world, including air pollution abatement, waste disposal and the interconnection of air and waste. Connections of air and water sustainability to other key areas, such as water, energy, agriculture and food and coastal resources will be emphasized. Offered in Malta.

ISAT 567. Case Studies in Sustainability: Agriculture and Food Security. *2 credits.*
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. Case Studies in Sustainability: Water. *2 credits.*
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. Case Studies in Sustainability: Marine and Coastal Resources. *2 credits.*
This course focuses on the exploration and analysis of case studies in the development of sustainable marine and coastal resources policies and practices around the world, including pollution, development and marine food supply. Connections of marine and coastal sustainability to other key areas, such as agriculture and food, energy, air and waste and water will be emphasized. Offered in Malta.

ISAT 570. Telecommunication Systems. *3 credits.*
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 credits.*
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. *1-3 credits.*
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 credits.*
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 620. Introduction to Systems Dynamics. *3 credits.*
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; advanced project management.

ISAT 630. Computer Modeling and Simulation. *3 credits.*
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 640. Information and Technology Management. *3 credits.*
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 650. Advanced Integrated Science and Technology. *3 credits.*
This course focuses on applied science and technology applications for K-12 teachers and industry trainers. Students will develop and assess sources of information on applied science and technology and develop inquiry-based activities to incorporate new issues in applied science and technology into existing curricula.

ISAT 652. Regulatory Issues. *3 credits.*
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 653. Quantitative Systems Analysis. *3 credits.*
Focuses on the life-cycle model of systems design and development. Includes concepts related to data modeling, economic evaluation, optimization methods, human factors, queuing theory, system test and evaluation, and design validation techniques. Object-oriented analysis and design considerations emphasized. *Prerequisite: ISAT 630.*

ISAT 654. Advanced Technology Management. *3 credits.*
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 credits.*
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 657. Management Information Systems. *3 credits.*
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 credits.*
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. 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. *1-3 credits.*
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 697. Thesis Preparation and Research Methods in a Multidisciplinary Environment. *1 credit.*
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 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as necessary.

ISAT 699. Thesis Continuance. *2 credits.*
Students completing registration for the maximum number of hours of project credit are required to register for continuance each semester, including summer, until they have received their degree. Continuance credits carry no credit hour production and do not count toward graduate program requirements.

ISAT 700. Thesis Research. *6 credits.*
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.

Kinesiology

Kinesiology Department

(540) 568-6145 www.jmu.edu/kinesiology

Department Head

Dr. Christopher Womack

Graduate Program Director – Exercise Physiology

Dr. Nick Luden

Graduate Program Director – Sport and Recreation Leadership

Dr. Benjamin Carr

Professors

S. Nye, M. Saunders, J. Williams, C. Womack

Associate Professors

B. Carr, J. Carr, T. Moran, K. Todd

Assistant Professors

E. Edwards, T. Hargens, N. Luden, D. Shonk

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 exercise, sport and leisure activities.

Goals

Program goals are to help students:

- Identify and describe important issues relevant to exercise science, sport, recreation and physical education.
- Educate others about the relevance of exercise, sport and leisure to individuals and to society.
- Develop and administrate safe, effective and scientifically based physical activity, sport and leisure programs that address individual, community and societal needs.
- Enable students to evaluate the quality of information germane to the disciplines of physical activity, sport and leisure.
- 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 concentrations in exercise physiology, clinical exercise physiology, nutrition and exercise, and sport and recreation leadership. Each of the concentrations offer either thesis or non-thesis option. The concentration in sport and recreation leadership within the master's in kinesiology is administered through the School of Hospitality, Sport and Recreation Management. 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.

Master of Science in Kinesiology

The following core is required for these concentrations:

- Exercise physiology
- Clinical exercise physiology
- Nutrition and exercise

Core Requirements	Credit Hours
KIN 542. Exercise Programs for Special Populations	3
KIN 555. Theories and Practices of Weight Management	3
KIN 644. Metabolic and Cardiorespiratory Exercise Physiology	3
KIN 645. Muscular and Hormonal Exercise Physiology	3
KIN 650. Exercise Testing, Evaluation and Prescription	3

KIN 655. Research Techniques	3
	18

Concentration in Exercise Physiology

This 33- to 36-credit hour program leads to a Master of Science degree with an intense focus in exercise physiology. Students in this program receive a broad-based preparation in exercise physiology including course work in advanced exercise physiology topics, physiological testing, exercise prescription and research.

Students may select either the thesis or non-thesis option and will be prepared to pursue a doctoral degree in a related field or to work as an exercise physiologist in the sport, recreation and fitness/wellness industries. Program goals were developed in conjunction with the knowledge, skills and abilities identified by the American College of Sports Medicine (ACSM) as essential for successful preparation as an Exercise Physiologist.

Exercise Physiology Requirements

Required Courses	Credit Hours
Kinesiology Core Requirements	18
KIN 547. Principles and Strategies of Athletic Development	3
KIN 643. Environmental Exercise Physiology	3
	24

Choose one of the following options:

Thesis Track	Credit Hours
MATH 522. Statistics	3
KIN 700. Thesis	6
Total Thesis Track Credits	33

Non-Thesis Track	Credit Hours
Electives in consultation with the adviser	6-9
Choose one of the following:	
KIN 681. Internship in Exercise Science	3-6
KIN 697. Directed Research in Kinesiology and Recreation Studies	3
Total Non-Thesis Track Credits	36

Clinical Exercise Physiology Concentration

This 33- to 36-credit hour exercise science program leads to a Master of Science degree with an emphasis in clinical exercise physiology. The program is designed to prepare students to work with clients with a variety of pathological or clinical disorders. Clients may include those with cardiovascular, pulmonary, metabolic, immunological, inflammatory, orthopedic and neuromuscular disorders. Other clients may include persons from geriatric, pediatric or obstetric populations.

Students may select either the thesis or non-thesis option and will be prepared to pursue a doctoral degree in a related field or to work in hospital-based and community wellness programs, as well as other clinical settings. Program goals were developed in conjunction with the knowledge, skills and abilities identified by the American College of Sports Medicine (ACSM) as essential for preparation as a Registered Clinical Exercise Physiologist.

Clinical Exercise Physiology Requirements

Required Courses	Credit Hours
Kinesiology Core Requirements	18
KIN 540. Clinical Exercise Physiology I	3
KIN 640. Clinical Exercise Physiology II	3
	24

Choose one of the following options:

Thesis Track	Credit Hours
MATH 522. Statistics	3
KIN 700. Thesis	6
Total Thesis Track Credits	33

Non-Thesis Track	Credit Hours
Electives in consultation with the adviser	6-9
KIN 681. Internship in Exercise Science	3-6
Total Non-Thesis Track Credits	36

Nutrition and Exercise Concentration

This 33- to 36-credit hour concentration leads to a Master of Science degree with an emphasis in exercise physiology and nutrition. Students in this program receive preparation in exercise physiology including course work in advanced exercise physiology, physiological testing, exercise prescription and research, as well as related course work in nutrition.

Students may select either the thesis or non-thesis option and will be prepared to pursue a doctoral degree in a related field or to work as an exercise physiologist in the sport, recreation and fitness/wellness industries. Program goals were developed in conjunction with the knowledge, skills and abilities identified by the American College of Sports Medicine as essential for successful professional preparation as an Exercise Physiologist.

Nutrition and Exercise Concentration Degree Requirements

Required Courses	Credit Hours
Kinesiology Core Requirements	18
NUTR 545. Nutrition and Exercise	3
KIN 582. Nutrition and Metabolism	3
	24

Choose one of the following options:

Thesis Track	Credit Hours
MATH 522. Statistics	3
KIN 700. Thesis	6
Total Thesis Track Credits	33

Non-Thesis Track	Credit Hours
Electives in consultation with the adviser	6-9
Choose one of the following:	
KIN 681. Internship in Exercise Science	3-6
KIN 697. Directed Research in Kinesiology and Recreation Studies	3
Total Non-Thesis Track Credits	36

Sport and Recreation Leadership Concentration

See the sport and recreation leadership section for details.

Master of Arts in Teaching

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

Minimum Requirements	Credit Hours
KIN 511. Technology in Health and Physical Education	3
KIN 512. Instructional Methods in Middle and Secondary Physical Education	3
KIN 513. Professional Issues for Prospective Physical and Health Educators	3
KIN 514. Methods in School Health for PHETE	3
KIN 610. Curriculum Design and Development in Health and Physical Education	3
KIN 611. Teaching Diverse Populations in Health and Physical Education	3
KIN 612. Analysis of Teaching and Learning	3
KIN 683. Secondary Internship in Health and Physical Education	6
Choose one of the following:	3
KIN 655. Research Techniques	
HTH 655. Research Techniques	
EDUC 630. Inquiry in Education	
Approved elective	3
	33

Course Offerings

Kinesiology

KIN 501. Workshop in Kinesiology. *1-3 credits.*
An intensive study of one aspect of kinesiology that is of current concern to physical educators in the field.

KIN 506. Applied Biomechanics. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
An overview and application of methods for teaching health in the schools 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 credits.*
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 540. Clinical Exercise Physiology I. *3 credits.*
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 542. Exercise Programming for Special Populations. *3 credits.*
This course will include an in-depth study of the recommended procedures for exercise testing and prescription for non-diseased special populations, children and youth, elderly, women and pregnant women.

KIN 547. Physiology of Performance Enhancement in Endurance Sports. *3 credits.*
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 credits.*
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 570. Administration in Sport and Recreation Leadership. *3 credits.*
Specific problems and new developments in the administration of sport and exercise programs, including business procedures, equipment, facilities, conduct of athletic events, school law and liability, staff and public relations.

KIN 572. Facilities in Sport and Recreation Leadership. *3 credits.*
The planning, construction, maintenance and utilization of sport, exercise and recreation facilities.

KIN 575. Gender Issues in Sport and Recreation Leadership. *3 credits.*
A study of the institutional, political and societal perpetuation of gender identity and its relationship to sport participation.

KIN 580. Human Resource Management and Development in Campus Recreation. *3 credits.*
An overview of human resource management and human resource development in 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 campus recreation program. Skill development will include areas such as hiring, developing position descriptions, evaluation, training, career development, and supervision of student and professional staff members.

KIN 581. Leadership in Recreation Professions. *3 credits.*
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.

KIN 582. Programming and Operations in Campus Recreation. *3 credits.*
An in-depth analysis of programming and operations 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. The course will also cover operational issues such as reservations, space prioritization, equipment and facility maintenance issues, and revenue generation.

KIN 610. Curriculum Design and Development in Health and Physical Education. *3 credits.*
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 credits.*
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 credits.*
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 622. Motivation and Achievement in Sport Leadership. *3 credits.*
The study of sport performance including achievement motivation, individual aggression, attribution theory and goal setting. Application of theoretical concepts to teaching and coaching for optimal performance.

KIN 625. Social Issues in Sport and Recreation Leadership. *3 credits.*
Current research and literature in the sociology of sport. Emphasis is on sport in American culture; issues in international sport are considered.

KIN 631. Philosophy of Sport and Recreation Leadership. *3 credits.*
A critical review of literature concerning the nature and significance of sport from a philosophic perspective, including current modes of inquiry. Implications for sport in education are also discussed.

KIN 640. Clinical Exercise Physiology II. *3 credits.*
A study of the benefits, risks, 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.

KIN 643. Environmental Exercise Physiology. *3 credits.*
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). *Prerequisites: KIN 644 and KIN 645*

KIN 644. Metabolic and Cardiorespiratory Aspects of Exercise. *3 credits.*
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 credits.*
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 649 A, B, C. Practicum in Fitness Programs. *1 credit each.*
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 credits.*
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 credits.*
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 670. Program Development for Wellness Centers. *3 credits.*
A study of the development, implementation and administration of wellness/fitness programs that emphasize the adult population.

KIN 673. Fiscal Management in Sport and Recreation Leadership. *3 credits.*
An overview of fiscal resources and financial administration of sport and 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.

KIN 675. Legal Aspects of Sport and Recreation Leadership. *3 credits.*
A study of legal issues related to the administration of sport and 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.

KIN 678. Theories and Issues of Coaching. *3 credits.*
Both theoretical and practical aspects of coaching in secondary schools and higher education.

KIN 680. Reading and Research. *3 credits.*
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. *3-9 credits.*
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 program. *Prerequisite: Permission of the instructor.*

KIN 683. Secondary Internship in Health and Physical Education. *6 credits.*
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 credits.*
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 685. Internship in Sport and Recreation Leadership. *3-6 credits.*
Practical experience in applying administrative theory to problems encountered in a professional setting. Specific assignments will be determined by the needs of the student. (Amount of credit will be determined by the amount of experience acquired; no more than six hours can be counted toward a degree program). *Prerequisite: Permission of the instructor.*

KIN 697. Directed Research in Kinesiology and Recreation Studies. *3 credits.*
Advanced research in kinesiology and/or recreation under the direction of a graduate adviser. Course will be graded on an S/U basis. Course may not be repeated. *Prerequisites: KIN 655 and permission of the instructor.*

KIN 698. Comprehensive Continuance. *1 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed. *Prerequisite: Permission of the instructor.*

KIN 699. Thesis Continuance. *2 credits.*
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. *3-6 credits.*
This course is graded on a satisfactory/unsatisfactory (S/U) basis. *Prerequisites: KIN 655 or equivalent, and permission of the instructor.*

Learning, Technology and Leadership Education

Learning, Technology and Leadership Education Program

3310 Memorial Hall, ESC 6913
(540) 568-2291/8012

www.jmu.edu/coe/ltle

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Assistant Professors

E. Brantmeier, N. Brantmeier, M. Estes, R. Ingram

Instructors

R. Snow, D. Strawbridge, N. Swayne

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 men and women 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.

Programs of Study

Learning, Technology and Leadership Education offers these programs:

- Master of Science in Education (M.S.Ed) in Adult Education/Human Resource Development with six possible concentrations
- Master of Education (M.Ed.) in Education with a concentration in Educational Leadership
- Certificate in Educational Leadership
- Master of Education (M.Ed.) in Education with a concentration in Educational Technology
- Certificates in Educational Technology, Educational Technology Leadership and eLearning
- Master of Education (M.Ed.) in Education with a concentration in Equity and Cultural Diversity
- Master of Arts in Teaching (MAT) with a concentration in Teaching English to Speakers of Other Languages (TESOL)

Adult Education/Human Resource Development

M.S.Ed in Adult Education/Human Resource Development

Admission Criteria

- An online application submitted at: 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). Applicants should use JMU's designated code of 5392 to send electronic test scores.

The following must be submitted when submitting the online application:

- 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.

Master of Science in Education in Adult Education/ Human Resource Development

Degree Requirements

Degree Requirements	Credit Hours
Program courses	30-33
Research Paper or Thesis	3-6
	36

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.

Minimum Requirements	Credit Hours
AHRD 520. Foundations of Adult Education/Human Resource Development	3
or EDUC 641. Learning Theories and Instructional Models	
AHRD 540. Leadership and Facilitation	3
AHRD 580. Learning in Adulthood	3
AHRD 600. Performance Analysis and Needs Assessment in Adult Education/ Human Resource Development	3
AHRD 630. Research Methods and Inquiry in Adult Education/ Human Resource Development	3
AHRD 640. Program Evaluation and Measurement in Adult Education/ Human Resource Development	3
LTLE 570. Design and Development of Digital Media	3
LTLE 610. Principles of Instructional Design	3
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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.

Concentration in AHRD Program Evaluation and Measurement

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.

Minimum Requirements

Select a minimum of six hours from the electives listed below:

- AHRD 550. Human Resource Work Experience
- AHRD 620. Consulting AHRD
- AHRD 690. Special Studies in AHRD
- ISAT 620. Research Methods in a Multidisciplinary Environment
- LTLE 695. Applied Research
- PSYC 600. Introduction to Measurement and Statistics
- PSYC 605. Research and Inferential Statistics
- PSYC 606. Advanced Measurement Theory
- PSYC 608. Multivariate Statistical Methods in Psychology
- PUAD 606. Program Evaluation in Public Administration

Concentration in Higher Education

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.

Minimum Requirements

Select a minimum of six hours from the electives listed below.

- AHRD 670. American Higher Education
- AHRD 671. Teaching and Learning Processes in Higher Education
- AHRD 673. The Community College
- AHRD 690. Special Studies in AHRD
- ADSU 640. The Fundamentals of Educational Administration
- ADSU 642. Leadership for School-Community Relations
- ADSU/LEAD 741. Leading Educational Organizations

EDUC 642. Curriculum Theory and Issues
PUAD 561. Education and Social Policy

Concentration in Human Resource Management

This concentration is designed to acquaint learners with business and industry and practices related to the management of human resources.

Minimum Requirements

Select a minimum of six hours from the electives listed below.

AHRD 550. Human Resource Work Experience
AHRD 570. Diversity & Ethics in AHRD
AHRD 620. Consulting in AHRD
AHRD 635. Organization and Administration of Adult Education Human Resource Development
AHRD 690. Special Studies in Adult Education/Human Resource Development
LTLE 695. Applied Research
MBA 600. Organizational Behavior
MBA 650. Managing Human Resources/Personnel Administration
MBA 651. Labor Relations
PUAD 625. Public Organizational Behavior
PUAD 626. Strategic Planning and Management

Concentration in Instructional Design

This concentration is designed to equip learners with skills to design and implement learning strategies using principles of adult learning and instructional design together with technology applications in adult education/human resource development settings.

Minimum Requirements

Select a minimum of six hours from the electives listed below.

AHRD 550. Human Resource Work Experience
AHRD 620. Consulting in AHRD
AHRD 690. Special Studies in AHRD
LTLE 565. Educational Technology Management
LTLE 580. Developing and Critiquing Visual Literacy
LTLE 625. Advanced Video & Audio Production
LTLE 645. Games, Simulations and Virtual Worlds for Learning
LTLE 650. eLearning Design
LTLE 655. Implementation and Evaluation of eLearning
LTLE 695. Applied Research
WRTC 521. Web Design
WRTC 565. Digital Rhetoric
WRTC 655. Electronic Graphic Design

Concentration in Leadership and Facilitation

This concentration is designed for learners who wish to combine leadership, facilitation and creativity with an approved adult education/human resource development program.

Minimum Requirements

Select a minimum of six hours from the electives listed below.

ADSU 642. Leadership for School – Community Relations

ADSU/LEAD 741. Leading Educational Organizations
AHRD 550. Workshop in Adult Education/Human Resource Development
AHRD 560. Facilitating in Adult Education/Human Resource Development
AHRD 620. Consulting in AHRD
AHRD 660. Facilitating Experiential and Action Learning
AHRD 690. Special Studies in Adult Education/Human Resource Development
LTLE 695. Applied Research
PUAD 663. Philanthropy and Resource Development
PUAD 650. Management of Nongovernmental Organizations

Individualized Concentration

For minimum requirements, see the adviser.

Qualifying Examination

At the end the second semester in which the learner is enrolled in this program, he/she will participate in a qualifying examination to be conducted by the program faculty. This examination will cover content knowledge covered in the first two semesters of the program.

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.

Educational Leadership

M.Ed in Educational Leadership

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 national 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.

Master's Degree in Education with a Concentration in Educational Leadership

Degree Requirements	Credit Hours
Professional Core	15
EDUC 620. Changing Contexts of American Schools	3
EDUC 625. Evaluation in Education	3
EDUC 630. Inquiry in Education	3
EDUC 641. Learning Theory and Instructional Models	3
EDUC 642. Curriculum Theory and Issues	3
Leadership Concentration	18-21
ADSU 540. Technology for Administrators(may be waived with acquisition of Technology Skills notation on the teaching certificate)	3
ADSU 640. Foundations of School Administration	3
ADSU 641. School Law	3
ADSU 642. Leadership for School-Community Relations	3
ADSU 643. The Principalship	3
ADSU 644. Supervision and Development of School Personnel	3
ADSU 652. School Finance and Business Management	3
Practicum and Internship Experiences	3
ADSU 668. Internship in the Principalship	3
or ADSU 678. Full-time Internship for School Administrators	3
	36-39

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 PreK-12 administration and supervision in the Commonwealth of Virginia.

Certificate in Educational Leadership

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.

Required Courses

EDUC 641. Learning Theories
ADSU 540. Technology for Administrators (may be waived with DOE state mandated acquisition of technology skills as noted on the Teaching Certificate)
ADSU 640. Foundations of Administration
ADSU 641. School Law
ADSU 642. Leadership for School and Community Relations
ADSU 643. The Principalship
ADSU 644. Supervision and Development of School Personnel
ADSU 652. School Business Management and Finance

ADSU 668. Internship for Principals

or ADSU 678. Full-time Internship for School Administrators

Refer to the JMU Outreach and Engagement website for additional information.

Educational Technology

M.Ed. in Educational Technology

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 K12, higher education, business, industry, government and consulting. The program provides candidates with opportunities to explore and research emerging technologies for learning. 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 Master of Education with concentration in Educational Technology 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:

- GRE scores at the 25th percentile or higher for both verbal and quantitative sections.
- Undergraduate grade point average of 2.75 or higher.
- Baccalaureate degree from a regionally accredited college/university.
- Professional resume.
- Two letters of reference.
- Work experience.
- 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.
- Works samples – 2 or 3 examples of how the applicant is now using technology (these will be requested by the program director when the application is complete).

Outcomes

Candidates will demonstrate the knowledge, skills and dispositions to:

- design conditions for learning by applying principles of instructional systems design, message design, instructional strategies and learner characteristics.
- develop instructional materials and experiences using print, audiovisual, computer-based and integrated technologies.
- plan, organize, coordinate and supervise instructional technology by applying principles of project, resource, delivery system and information management.
- evaluate the adequacy of instruction and learning by applying principles of problem analysis, criterion-referenced measurement, formative and summative evaluation, and long-range planning.

Degree Requirements

To complete a Master of Education degree with a concentration in educational technology, the candidate will complete a minimum of 36 hours of course work to include a professional core, educational technology core and advanced areas of study. In addition, candidates must successfully complete key assessments throughout the program. Full-time students will take a minimum of two years, mostly likely five semesters, to complete the program. Part-time students will be able to map a personal plan for completion within six years of acceptance or first course transferred into the program, as applicable.

Master of Education with a Concentration in Educational Technology

Degree Requirements

Degree Requirements	Credit Hours
Professional Core	12
EDUC 630. Inquiry in Education	
EDUC 641. Learning Theory and Instructional Models	
EDUC 642. Curriculum Theory and Issues	
LTLE 610. Principles of Instructional Design	
Educational Technology Core	12
LTLE 560. Foundation of Education Technology	
LTLE 565. Educational Technology Management	
LTLE 570. Design and Development of Digital Media	
LTLE 580. Developing and Critiquing Visual Literacy	
Educational Technology Advanced Courses (Choose three courses)	9
LTLE 611. User Interface Design	
LTLE 622. Professional Design in Educational Technology	

LTLE 625. Advanced Video and Audio Production	
LTLE 631. Data Visualization	
LTLE 645. Games Sims and Visual Worlds for Learning	
LTLE 650. ELearning Design	
LTLE 655. Implementation and Evaluation of eLearning	
Final Project	3
LTLE 695. Applied Research	
	36

Certificates in Educational Technology

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 Programs

Educational Technology (12 hrs)

- EDUC 641. Learning Theory and Instructional Models (3)
- LTLE 610. Principles of Instructional Design (3)
- LTLE 560. Foundations of Educational Technology (3)
- LTLE 570. Design and Dev of Digital Media (3)

Educational Technology Leadership (12 hrs)

- LTLE 560. Foundations of Educational Technology (3)
- LTLE 565. Educational Technology Management (3)
- LTLE 570. Design and Dev of Digital Media (3)
- LTLE 622. Professional Development in Educational Technology (3)

eLearning (12/15 hrs)

- EDUC 641. Learning Theory and Instructional Models (3)
- LTLE 570. Design and Dev of Digital Media (3)
- LTLE 610. Principles of Instructional Design (3)
- LTLE 650. eLearning Design (3)
- LTLE 655. Implementation and Evaluation of eLearning (3)

Spanish Language and Culture

M.Ed. in Spanish Language and Culture for Educators

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.

Master of Education with a Concentration in Spanish Language and Culture for Educators Degree Requirements

Degree Requirements	Credit Hours
Professional Core	9
EDUC 630. Inquiry in Education	
EDUC 641. Learning Theory and Instructional Models	
EDUC 642. Curriculum Theory and Issues	
LTLE 610. Principles of Instructional Design	
Spanish Language and Culture	21
EDUC 501. Workshop: Grammar II	
EDUC 501. Workshop: History fo the Spanish Language	
TESL 525. Cross Cultural Education	
EDUC 613. Issues in Education: Grammar I – Spanish Linguistics	
TESL 626. Concepts of First and Second Language Acquisition	
TESL 630. Texts for Second Language Learners	
EDUC 690. Internship in Education – Spanish Linguistics in the Classroom	
Final Project and Research	6
EDUC 660. Facilitating Experiential and Action Learning	
EDUC 680. Reading and Research	
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Course Offerings

School Administration

ADSU 640. The Fundamentals of Educational Administration. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 School Personnel. *3 credits.*
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 credits.*
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 658. Practicum in School Administration. *3 credits***.**
The practicum provides administrative field experience in a school setting. Students spend a minimum of 75 hours during the semester working under the guidance of a practicing school administrator and university supervisor. Other course requirements include seminars and the completion of an administrative project. Course graded on an S/U basis. *Prerequisites: Completion of a minimum of 15 credits and permission of instructor.*

ADSU 668. Internship for Principals. *3 credits.*
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 credits.*
Candidates spend a minimum 90 full-time days working under the 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. *1-3 credits.*
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. *Prerequisites: Written permission of the adviser and program coordinator.*

ADSU/LEAD 730. Advanced Learning Theories and Instructional Models. *3 credits.*
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.*

ADSU/LEAD 735. Advanced Curriculum Theory and Instructional Issues. *3 credits.*
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.*

ADSU/LEAD 741. Leading Educational Organizations. *3 credits.*
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.*

Adult Education/Human Resource Development

AHRD 520. Foundations of Adult Education/Human Resource Development. *3 credits.*
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 credits.*
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
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 560. Facilitating in Adult Education/Human Resource Development. *3 credits.*
This course equips students to participate in and facilitate groups in organizational settings. Students examine theories and tools for developing and supporting effective learning groups and will practice facilitation skills. The course will address group dynamics, clarification of group task/agenda, meeting goals and use of the self as a facilitating instrument.

AHRD 570. Diversity and Ethics in AHRD. *3 credits.*
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 580. Learning in Adulthood. *3 credits.*
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 credits.*
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 620. Consulting in AHRD. *3 credits.*
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 560, AHRD 580, AHRD 600, LTLE 530, or equivalent or permission of the instructor.*

AHRD 630. Research and Inquiry in Adult Education/Human Resource Development. *3 credits.*
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 credits.*
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 credits.*
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 660. Facilitating Experiential and Action Learning. *3 credits.*
This course examines the historical roots of action learning, organizational learning, various experiential and action methodologies; and a thorough description of action learning including what it is, key elements, when it works, organizational applications, and how it benefits the organization. *Prerequisites: AHRD 540 or permission of the instructor.*

AHRD 670. American Higher Education. *3 credits.*
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 credits.*
Instructional practices and themes are studied in relationship to programs in higher education.

AHRD 673. The Community College. *3 credits.*
The history, functions and personnel of the comprehensive community college in the American system of higher education are studied. Current issues facing the community college are explored.

AHRD 680. Reading and Research. *3-6 credits.*
Designed to provide the opportunity for supervised reading and research in a special interest area of adult education/human resource development. *Prerequisite: Approval from major adviser and completion of a basic research course.*

AHRD 690. Special Studies in Adult Education/Human Resource Development. *3 credits.*
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.
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. *Prerequisites: All core courses and/or concurrent with Reading and Research or Thesis Research.*

AHRD 698. Comprehensive Continuance. *1 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

AHRD 699. Thesis Continuance. *2 credits.*
Continued study, research and writing in the areas of thesis concentration. Course may be repeated as needed.

AHRD 700. Thesis Research. *3-6 credits.*
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. *Prerequisites: EDUC 630 and approval of graduate adviser.*

Education

EDUC 620. Changing Contexts of American Schools. *3 credits.*
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 credits.*
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 credits.*
Develop skills, insights and understandings which will enable the student to become an intelligent and critical consumer of educational inquiry and a productive participant in the inquiry process. *Prerequisites: Appropriate technology skills or EDUC 505.*

EDUC 641. Learning Theory and Instructional Models. *3 credits.*
This course focuses on the diverse nature of learners, the processes of learning and development, the role of the teacher, the design and delivery of instruction and the processes and strategies of teaching.

EDUC 642. Curriculum Theory and Issues. *3 credits.*
The study of curriculum theories and issues that lead to a comprehensive understanding of the purposes and functions of schools in a democratic society.

EDUC 682. Professional Development, Partnership and Advocacy. *1 credit*
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.*

For a full listing of EDUC courses, see the Early, Elementary and Reading Education section.

Learning, Technology and Leadership Education

LTLE 560. Foundations of Educational Technology. *3 credits.*
The purpose of this course is to provide you with a critical framework with which to assess the impact of technology on education. We 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.

LTLE 565. Educational Technology Management. *3 credits.*
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.

LTLE 570. Design and Development of Digital Media. *3 credits.*
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 K12 and business. This course provides skills for future digital media development.

LTLE 580. Developing and Critiquing Visual Literacy. *3 credits.*
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.

LTLE 610. Principles of Instructional Design. *3 credits.*
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.

LTLE 611. User Interface Design. *3 credits.*
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.

LTLE 622. Professional Development in Educational Technology. *3 credits.*
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.

LTLE 625. Advanced Video and Audio Production. *3 credits.*
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.

LTLE 631. Data Visualization. *3 credits.*
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.

LTLE 645. Games, Simulations and Virtual Worlds for Learning. *3 credits.*
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.

LTLE 650. eLearning Design. *3 credits.*
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. *Prerequisites: EDUC 641, LTLE 610 and LTLE 570.*

LTLE 655. Evaluation of eLearning. *3 credits.*
This advanced course will address the practice of eLearning implementation and the processes and tools used to evaluate its effectiveness. *Prerequisite: LTLE 650.*

LTLE 695. Applied Research. *3 credits.*
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. *Prerequisites: Approval of graduate adviser.*

Mathematics

Department of Mathematics and Statistics

305 Roop Hall, MSC 1911

(540) 568-7328 or (540) 568-6184

www.jmu.edu/mathstat/grad/

Academic Unit Head

David Carothers

Graduate Program Director

Anthony Tongen

Professors

D. Carothers, H. Hamdan, R.Lee, L. Lovin, S. Lucas, A. Tongen

Associate Professor

E. Arnold

Assistant Professor

A. Stevens

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, please contact Anthony Tongen, 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	Credit Hours
EDUC 630. Inquiry in Education	3
EDUC 631. Seminar in Educational Inquiry	1
EDUC 641. Learning Theories and Instructional Models	3
EDUC 642. Curriculum Theory and Issues	3
LTLE 570. Design and Development of Digital Media	3
MATH 510. Analysis for Teachers	3
MATH 512. Discrete Mathematics for Teachers	3
MATH 514. Algebra for Teachers	3
MATH 520. Geometry for Teachers	3
MATH 615. History of Mathematics	3

MATH 617. Probability and Statistics for Teachers I	3
MATH 618. Probability and Statistics for Teachers II	3
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Course Offerings

Mathematics

MATH 510. Analysis for Teachers. *3 credits.*
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 for Teachers. *3 credits.*
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. Algebra for Teachers. *3 credits.*
From an 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 and for certificate renewal by secondary school teachers. *Prerequisite: Undergraduate algebra or permission of instructor.*

MATH 520. Geometry for Teachers. *3 credits.*
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 teachers. *Prerequisite: Undergraduate mathematics through linear algebra or undergraduate geometry.*

MATH 522. Statistics for Researchers. *3 credits.*
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 615. History of Mathematics. *3 credits.*
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 teachers.

MATH 617. Probability and Statistics for Teachers I. *3 credits.*
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.

MATH 618. Probability and Statistics for Teachers II. *3 credits.*
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. *Prerequisite: MATH 617.*

MATH 685. Selected Topics II. *3 credits.*
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.

Middle, Secondary and Mathematics Education

Middle, Secondary and Mathematics Education Department
(540) 568-6793 www.jmu.edu/coe/msme/

Academic Unit Head
Dr. Steven Purcell

Graduate Program Director
Dr. Steven Purcell

Associate Professors
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Assistant Professors
K. Dunlap, A. Taylor-Jaffee, K. Schultz, K. Thunder

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 men and women for the multiple professions included in the college at both the undergraduate and graduate levels, not merely by developing 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.

Programs of Study

Middle, Secondary, and Mathematics Education offers the following programs:

- Master of Arts in Teaching (M.A.T.) with a concentration in middle school education, a fifth-year continuation initial licensure program designed to allow candidates to meet requirements for a license to teach students of grades 6-8 in Virginia's public schools.
- Master of Education (M.Ed.) in Education with a concentration in K-8 mathematics specialization. This program is offered in conjunction with the Department of Mathematics and Statistics.
- Master of Arts in Teaching (M.A.T) with a concentration in secondary education, a fifth year continuation initial licensure program designed to allow candidates to meet requirements for a license to teach students of grades 6-12 in Virginia's public schools.

Middle School Education

M.A.T. with a Concentration in Middle School Education (Grades 6-8)

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 passing Praxis II 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 passing Praxis II 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)
- Taken the Graduate Record Examination and scored at the 25th percentile or above. Exception: Students who complete their undergraduate degree and the appropriate teacher education pre-professional programs (majors and minors) at JMU are not required to take the Graduate Record Exam for admission to the M.A.T. program.

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.

Degree Requirements

As undergraduates, candidates must first complete 36 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 GPSYC 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.

Master of Arts in Teaching with a Concentration in Middle School Education (Grades 6-8)

Undergraduate Degree Requirements	Credit Hours
Second Year	
GPSYC 160. Life Span Human Development	3
EDUC 300. Foundations of American Education (must be completed with a grade of "B-" or higher)	3
Third Year	
The following courses must be completed with grades of "B-" or higher:	
EDUC 310. Teaching in a Diverse Society	3
MIED 311. Field Experience in Middle Education	2
READ 312. Reading and Writing across the Curriculum in the Middle Grades	3
(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
MSSE 371. Clinical Experience in Adolescent Education	1
(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
EXED 460. Differentiation of Instruction	3
Students complete two of the courses below based on their IDLS concentration areas (3 credits each):	6
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
MSSE 471. Field Experience in Middle Education	M
	36

Graduate Course Requirements	Credit Hours
The following courses must be completed with grades of "B-" or higher:	
EDUC 540. Educational Technology	3
EXED 512. Behavior Management in the Classroom	3
MSSE 630. Inquiry in the Classroom	3
MIED 620. Assessment in Middle Education	3
MSSE 650. Internship Seminar	3
MSSE 690. Internship in Middle and Secondary Education	8
MIED 610. Collaborative Leadership in School	3
MIED 656. Seminar in Middle Education	3
Approved Graduate Level Elective	3
	32

The 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 Criteria

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. 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 take the Graduate Record Exam (GRE) and meet all requirements for admission to The Graduate School. Candidates must submit passing Praxis II scores to the Education Support Center and complete all undergraduate middle education and content area prerequisite coursework prior to enrolling in M.A.T. graduate course work.

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.

M.Ed. with a Concentration in Middle School Education (Grades 4-8)

The M.Ed. program in middle education is not accepting students at this time.

Secondary Education

M.A.T. with a Concentration in Secondary Education (Grades 6-12)

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 passing Praxis II 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), and
- Taken the Graduate Record Examination and scored at the 25th percentile or above. Exception: Students who complete their undergraduate degree and the appropriate teacher education pre-professional programs (majors and minors) at JMU are not required to take the Graduate Record Exam for admission to the M.A.T. program.

Master of Arts in Teaching with a Concentration in Secondary Education (Grades 6-12)

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, foreign language (PreK-12), 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.

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, foreign languages, geology, 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.

Secondary Education Master of Arts in Teaching Undergraduate Program of Study

Undergraduate Prerequisites	Credit Hours
General Education	41-44
Major field of study	36-60
Undergraduate pre-professional studies	22-24
	99-128

Minimum requirement is 120 credit hours.

Secondary Education Master of Arts in Teaching Degree Requirements

Undergraduate Prerequisites – Second Year	Credit Hours
*G*PSYC 160. Life Span Human Development	3
MSSE 101. Introduction to the Profession (optional, but strongly recommended)	2
EDUC 300. Foundations of American Education (must be completed with a grade of "B-" or higher)	3
	6-8

Undergraduate Prerequisites – Third and Fourth Years	Credit Hours
The following courses must be completed with grades of "B-" or higher:	
EDUC 310. Teaching in a Diverse Society	3
MSSE 370. General Instructional Methods for Grades 6-12	3
MSSE 371. Clinical Experience in Adolescent Education (EDUC 310, MSSE 370, and MSSE 371 are corequisites)	1
MSSE 470. Content Methods for the Middle School	3
MSSE 471. Field Experience in the Middle School	3
READ 440. Literacy-Based Learning in Secondary Education (MSSE 470, MSSE 471 and READ 440 are corequisites)	3
	16

Graduate Course Requirements	Credit Hours
The following courses must be completed with grades of "B-" or higher:	
EDUC 540. Educational Technology	3
EXED 512. Behavior Management in the Classroom	3
EXED 520. Differentiation of Instruction and Academic Collaboration	3
MSSE 570. Content Methods Course for High School	3
MSSE 571. Content Area Field Experience in High School	3

(MSSE 570 and MSSE 571 are corequisites)	
MSSE 607. Middle and Secondary School Curriculum and Co-curriculum	3
MSSE 625. Assessment in Secondary Education	3
MSSE 630. Inquiry in the Classroom	3
MSSE 650. Internship Seminar	3
MSSE 675. Internship in Middle and Secondary Education [1]	8
(MSSE 650 and MSSE 675 are corequisites)	
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1 Candidates pursuing a Foreign Language teaching license take EDUC 675M and EDUC 675S, Internship in Foreign Language.

The 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 Criteria

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. Those applicants not having such course work 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 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, available online. Candidates must also take the Graduate Record Exam (GRE) and meet all requirements of admission to The Graduate School. Candidates must submit passing Praxis II scores to the Education Support Center and complete undergraduate secondary education and content area prerequisite course work prior to enrolling in MAT graduate course work.

M.Ed. in Education with a Concentration in Secondary Education (6-12)

The M.Ed. program in secondary education is not accepting new students at this time.

M.Ed. with a Concentration in K-8 Mathematics Specialization

The K-8 mathematics specialist concentration at James Madison University leads to a Masters of Education (M.Ed.) with a concentration in K-8 Mathematics Specialization and allows candidates to meet the competencies required for the K-8 Mathematics Specialists endorsement through the Virginia Department of Education. The program consists of 36 hours: 15 hours of course work in mathematics, 15 hours of course work in mathematics education and 6 hours of an externship.

The Mathematics Specialist concentration at James Madison University is a cohort program. We will accept 25 students into the program. Those interested in applying should complete the graduate admission application provided by The Graduate School (www.applyweb.com/apply/jmug). This program is offered jointly by the Department of Mathematics and Statistics and the Department of Middle, Secondary and Mathematics Education.

Admission Criteria

All criteria are considered when reviewing the candidates for admission to this Master of Education degree program. Criteria include:

- Satisfaction of all requirements for admission to The Graduate School.
- A minimum of three years of classroom teaching experience where mathematics instruction was a responsibility.
- Completion of a minimum of six hours of mathematics courses (graduate and/or undergraduate).
- Completion of the Praxis II for Middle School Math (code 5169; register at www.ets.org).
- Two letters of recommendation.
- A two- to three-page personal statement indicating the reasons for enrolling in the concentration.
- Applicants may also be asked to complete an interview with the mathematics education faculty.

Degree Requirements

Course Requirements	Credit Hours
MATH 502. Number and Operations for K-8	3
MATH 503. Algebra and Functions for K-8	3
MATH 504. Rational Numbers for K-8	3
MATH 505. Probability and Statistics for K-8	3
MATH 506. Geometry for K-8	3
MAED 626. Advanced Mathematics Instruction for K-8	3
MAED 627. Assessment of Learners (Leadership I)	3
MAED 628. Diverse Learners in the Mathematics Classroom	3
MAED 629. Professional Development of Adult Learners (Leadership II)	3
MAED 630. Research in Mathematics Education (Leadership III)	3

MAED 631. Externship in Education I	3
MAED 632. Externship in Education II	3
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Master of Education in Mathematics Degree

For information on the Master of Education in mathematics, see Mathematics.

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.

Course Offerings

Mathematics Education

MAED 501. Special Topics in Mathematics Education. *1-3 credits.*
Designed to allow students to explore selected topics in mathematics education.

MAED 600. Seminar in Mathematics Education. *3 credits.*
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); implementation of 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 credits.*
This course offers opportunities for teachers to explore curricular goals and implementations for various mathematical 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 620. Teaching Mathematics with Technology. *3 credits.*
This course offers opportunities for teachers to explore research-based applications of technology tools in secondary and middle school mathematics. Teachers will engage in advanced use of various technology tools for learning and teaching mathematics, including designing technology environments, appropriate investigation tasks, and professional developmental activities.

MAED 626. Advanced Mathematics Instruction For K-8. *3 credits.*
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. *Prerequisites: MATH 502.*

MAED 627. Assessment of Learners (Leadership I). *3 credits.*
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. *Prerequisites: MATH 502 and MAED 626.*

MAED 628. Diverse Learners in The Mathematics Classroom. *3 credits.*
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. *Prerequisites: MATH 502, MATH 503, MAED 626 and MAED 627.*

MAED 629. Professional Development of Adult Learners (Leadership II). *3 credits.*
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. *Prerequisites: MATH 502, MATH 503, MATH 504, MATH 505, MAED 626, MAED 627, and MAED 628.*

MAED 630. Research in Mathematics Education (Leadership III). *3 credits.*
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. *Prerequisites: MATH 502, MATH 503, MATH 504, MATH 505, MAED 626, MAED 627, MAED 628, and MAED 629.*

MAED 631. Externship in Education I. *3 credits.*
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 specialists in an elementary/middle school setting. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
This course will explore topics important to the mathematical experiences of students in K-8 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 credits.*
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. *Prerequisites: MATH 502, MAED 626, MAED 627.*

MATH 504. Rational Numbers for K-8. *3 credits.*
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. *Prerequisites: MATH 502, MATH 503, MAED 626, MAED 627, MAED 628, MAED 629.*

MATH 505. Probability and Statistics for K-8. *3 credits.*
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. *Prerequisites: MATH 502, MATH 503, MATH 504, MAED 626, MAED 627, MAED 628, MAED 629.*

MATH 506. Geometry for K-8. *3 credits.*
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. *Prerequisites: MATH 502, MATH 503, MATH 504, MATH 505, MAED 626, MAED 627, MAED 628, MAED 629, MAED 630 and MAED 631.*

MATH 510. Analysis for Teachers. *3 credits.*
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 for Teachers. *3 credits.*
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. Algebra for Teachers. *3 credits.*
From an 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 and for certificate renewal by secondary school teachers. *Prerequisite: Undergraduate algebra or permission of instructor.*

MATH 520. Geometry for Teachers. *3 credits.*
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 teachers. *Prerequisite: Undergraduate mathematics through linear algebra or undergraduate geometry.*

MATH 615. History of Mathematics. *3 credits.*
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 teachers.

MATH 618. Probability and Statistics for Teachers II. *3 credits.*
A course to update and broaden secondary teacher's capability and point-of-view with respect to selected topics in statistics and to prepare teachers to teach AP statistics. Course may be taken for graduate credit and for certificate renewal by secondary school teachers. *Prerequisite: MATH 517.*

MATH 685. Selected Topics II. *3 credits.*
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.

Middle Education

MIED 501. Workshop in Middle Education. *1-3 credits.*
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 credits.*
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 credits.*
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 credits.*
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. *Prerequisites: MSSE 370, and admission to the M.A.T. program in Middle Education.*

MIED 656. Seminar in Middle Education. *3 credits.*
An intensive study of selected problems in middle education. Research findings are reviewed and educational theory is explored.

MIED 680. Reading and Research. *3 credits.*
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. *Prerequisites: Written permission of adviser and program coordinator.*

Middle and Secondary Education

MSSE 570 (E, H, M, or S) Content Methods Course for High School. *3 credits.*
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. *Prerequisites: MSSE 470, MSSE 471, READ 440, admission to teacher education, and admission to the M.A.T. program. Corequisite: MSSE 571.*

E. English Teaching Methods, Grades 9-12. *3 credits.*

H. Social Studies Teaching Methods, Grades 9-12. *3 credits.*

M. Mathematics Teaching Methods, Grades 9-12. *3 credits.*

S. Natural Sciences Teaching Methods, Grades 9-12. *3 credits.*

MSSE 570F. Methods of Language Teaching. *3 credits.*
Research findings about language teaching will be used to identify the most effective instructional strategies for teaching languages to students in grades preK-12. Emphasis will be on developing plans for employing the strategies and making appropriate instructional decisions based on instructional goals, the learner, and available resources. *Prerequisites: MSSE 370, admission to Teacher Education and admission to the M.A.T. program for Fifth year M.A.T. foreign language students; ESL minors should have completed EDUC 422, EDUC 425 and EDUC 428. Corequisite: MSSE 571F for Fifth year M.A.T. foreign language students.*

MSSE 571 (E, H, M, S). Content Area Field Experience in High School. *3 credits.*
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. *Prerequisites: MSSE 470, MSSE 471, READ 440.*

E. Field experience in High School English, Practicum III. *3 credits.*

H. Field Experience in High School Social Studies, Practicum III. *3 credits.*

M. Field Experience in High School Mathematics, Practicum III. *3 credits.*

S. Field Experience in High School Natural Science, Practicum III. *3 credits.*

MSSE 571F. Field Experience in Foreign Language, Practicum III. *3 credits.*
Provides practical classroom experience in elementary, middle and high school settings to middle and secondary foreign language students 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.

MSSE 607. Middle and Secondary Curriculum and Co-Curriculum. *3 credits.*
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. *Prerequisites: MSSE 370, admission to teacher education, and admission to the M.A.T. program.*

MSSE 625. Assessment in Secondary Education. *3 credits.*
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. *Prerequisites: MSSE 370, Admission to Teacher Education and the M.A.T. program.*

MSSE 630. Inquiry in the Classroom. *3 credits.*
Skills, methods, insights and understandings which will enable the beginning teacher to become an intelligent and critical consumer of educational inquiry and a productive participant in the process of classroom-based inquiry. *Prerequisites: Admission to teacher education and the M.A.T. program.*

MSSE 631. Inquiry Seminar. *1 credit.*
The course is designed to provide technical support and feedback for prospective teachers to successfully complete a classroom based inquiry project during their student teaching experience. Students will be graded on an S/U basis. *Prerequisites: MSSE 630, admission to the M.A.T. program, and admission to student teaching.*

MSSE 650. Internship Seminar. *3 credits.*
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. *Corequisite: MSSE 690 for middle education students or MSSE 675 for secondary education students.*

MSSE 675. Internship in Middle and Secondary Education. *4 credits.*
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. *Corequisite: MSSE 650.*

MSSE 680. Applied Research in Middle and Secondary Education. *3 credits.*
Provides students with the resources, skills, and knowledge required to conduct an individualized classroom-based inquiry project as a capstone activity in the M.A.T. program. *Prerequisite: MSSE 630.*

MSSE 690. Internship in Middle Education. *4 credits.*
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. *Corequisite: MSSE 650.*

Secondary Education

SEED 600. Secondary Education in America: Past, Present and Future. *3 credits.*

The changing face of the American secondary school will be studied and attention will be given to many of the philosophical, social, cultural, demographic and other factors impacting those changes. Emphasis will be placed on problems, current trends and future perspectives. *Prerequisite: EDUC 620.*

SEED 660. Instructional Development in the Secondary School. *3 credits.*
Effective teaching techniques and innovative forms of organization and instruction in secondary education will be studied. Emphasis will be on teaching strategies and behaviors and materials selection for serving secondary school students. *Prerequisite: An instructional methods course.*

SEED 680. Reading and Research. *1-3 credits.*
Opportunities for directed reading and research in secondary English, foreign language, mathematics, science and/or social studies. *Prerequisites: EDUC 630 or equivalent and written permission of the adviser and program coordinator.*

Music

School of Music
(540) 568-6719 www.jmu.edu/music

Director
Dr. Jeffrey Bush

Graduate Program Director and Associate Director of the School of Music
Dr. Mary Jean Speare

Professors
S. Bolstad, J. Bush, B. Chandler, D. Cottrell, G. Dobner, C. Dotas, J. Haney, J. Hilliard, W. Huang, J. Little, R. McCashin, D. Pope, C. W. Rice, G. Ritcher, E. Ruple, K. Stees, C. Stevens

Associate Professors
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Assistant Professors
V. Curry, R. Hallahan, L. Maynard, D. Stringham, J. van der Vat-Chromy, R. Wheaton, I. Zook

Instructors
S. Rikkers, B. Witmer

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.

Master 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.

Objectives

Students graduating from the M.M. program (with concentrations in Composition, Conducting, Music Education, and Performance) will be able to:

Composition:

1. formulate a personal creative style of composition.
2. demonstrate the fundamental concepts of form, harmony, counterpoint and orchestration.
3. differentiate and apply the techniques and aesthetics of musical creation.
4. apply the core principles of effective research as scholars and composers.

Conducting:

1. demonstrate application of physical conducting skills and rehearsal techniques through the performance of advanced repertoire in the student's area of specialization.
2. formulate advanced insights into the artistic and formal structure of music through score study in the student's area of specialization.
3. describe the musical and formal elements of the major literature in the student's area of specialization (vocal/choral or instrumental).
4. apply the core principles of effective research as scholars and conductors.

Music Education:

1. communicate effectively both verbally and in writing.
2. articulate, critique, and synthesize the foundations and principles of music education.
3. demonstrate advanced methodologies in the student's area of specialization.
4. apply the core principles of effective research as scholars and practitioners.

Music Performance:

1. demonstrate application of musical and technical mastery in the student's area of specialization (instrumental or voice).
2. identify and describe the standard solo, chamber, and ensemble repertoire in the student's area of specialization.
3. apply the core principles of effective research as scholars and performers.

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:

- Conducting – a lecture recital
- Music education – a thesis, document or research project in MUED 691
- Performance – a recital or lecture recital
- 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.

Concentrations

Composition Concentration Requirements

Minimum Requirements	Credit Hours
MUS 600. Research Methods	3
MUS 701. Analytical Techniques I	3
MUS 702. Analytical Techniques II	3
MUS 551, MUS 552, MUS 651 or MUS 652. Music Composition	6
MUS 750, MUS 752, MUS 754 or MUS 756. Graduate Seminar	3
MUAP courses. Applied Studies and/or Ensemble	2
MUS 697. Composition Final Project	2
MUAP 697. Graduate Composition Recital	1
Electives in music literature, music history, performance, pedagogy, theory and additional composition	9
	32

Conducting Concentration Requirements

Minimum Requirements	Credit Hours
MUS 600. Research Methods	3
MUS 701. Analytical Techniques I	3
MUS 750, MUS 752, MUS 754 or MUS 756. Graduate Seminar	3
Music Literature	6
Choral track [1]	
MUS 556 and MUS 557. Choral Literature	
Wind track [2]	
MUS 548. History and Literature of Wind Performance	
MUS 564. Symphonic Literature	
Orchestral track [3]	
MUS 707B and MUS 708B. Score and Literature for Orchestral Conductors I and II	
MUAP 610. Applied Conducting 3 (three credits each term)	6
A minimum of six credits are to be earned in one of the courses below; any of the other courses may be taken as electives:	
MUAP 610A. Choral Conducting	
MUAP 610B. Orchestral Conducting	
MUAP 610C. Wind Conducting	
MUAP 696. Lecture Recital	2
Approved electives, 500-700 level	9
	32

1 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.

2 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.

3 Lab in ensemble will be required each semester of enrollment in applied conducting.

Music Education Concentration Requirements

Minimum Requirements	Credit Hours
MUS 548, 556, 557, 562, 563, 564, 578, 579, 750, 752, 754. or MUS 756. Music Literature	3
MUS 600. Research Methods	3
MUED 670. Principles and Practices in Music Education	3

MUED 671. Research in Music Education	2
Choose one of the following:	6
MUED 680 (3 credits) and Music education elective courses (3 credits) [1]	
MUED 700. Thesis (6 credits)	
Music courses (MUS) Theory, Arranging, Counterpoint, Analytical Studies in Music Literature or Music Theory Practices	2-3
Applied music study (MUAP)	4
(must include two credits of applied lessons, may include two credits of ensembles)	
Approved electives [1, 2]	6-7
	30

1 MUED 660 and MUED 661 are strongly recommended as electives for students pursing 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.

Performance Concentration Requirements [1]

Minimum Requirements	Credit Hours
MUS 600. Research Methods	3
MUS 701. Analytical Techniques I	3
MUS 750, MUS 752, MUS 754 or MUS 756. Graduate Seminar	3
MUAP 500 level. Ensembles [2]	2-4
MUAP 600 level. Applied major [2]	6-9
MUAP 695. Graduate Recital [2]	1
Music electives in theory, literature and pedagogy	6
Approved electives, 500-700 level	3-6
	32

1 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.

2 Minimum of 11 credits in the applied major, ensemble and recital credits.

Optional Singing Health Emphasis (in addition to the Performance Requirements for Vocal)

Minimum Requirements	Credit Hours
CSD 656. Voice Disorders	3
PSYC 601. Special Topics in Psychology: Performance Psychology	3
MUPED 777. Vocal Pedagogy I	3
MUPED 778. Vocal Pedagogy II	3
MUPED 780. Seminar in Singing Health Specialization	3
CSD 582. Intern Speech Practicum (clinical observation at the JMU/Rockingham Community Hospital Collaborative Voice and Swallowing Clinic)	1
Electives (choose two of the following):	6
CSD 604. Neuroanatomy and Neurophysiology of Speech and Language	
CSD 605. Physiological and Acoustical Phonetics	
PSYC 614. Advanced Developmental Psychology	
PSYC 622. Abnormal Psychology	
	22

This emphasis requires three undergraduate courses as prerequisites.

Undergraduate Prerequisites	Credit Hours
CSD 208. Anatomy and Physiology of the Ear and Voice Mechanism	3
CSD 209. Acoustics of Hearing and Speech	3
KIN 202. Biological Foundations of Kinesiology	3

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.

Doctor of Musical Arts

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 degree requires completion of a minimum of ninety (90) credit hours, including 18 hours of applied instruction plus 6 elective credits; 22 hours of literature, analysis and topical Seminars; 18 hours of recitals, documents and research methods; 6 hours of pedagogy and 20 hours of area-specific courses.

During the degree program, exceptionally qualified students may earn up to 30 credit hours by examination and/or transfer. After completion of all course work and three recitals, 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)
- Official transcripts of all undergraduate and graduate course work
- 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)

Additional Requirements for International Applicants

- TOEFL of at least 550 (written test) [1]
- A financial statement prior to application

1 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 Warren Hall. 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, all 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. Approximately seven doctoral teaching assistantships per year will be offered on a competitive basis.

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 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 voice).
- create and deliver effective pedagogical instruction.
- analyze the standard solo, chamber and ensemble repertoire in the student's area of specialization (instrumental or voice).
- communicate effectively about music through a) writing and b) speaking.

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 a) writing and b) speaking.

Doctor of Musical Arts Curriculum

Core Requirements	Credit Hours
MUAP. Applied Instruction	18
MUS 600. Research Methods	3
MUPED 704 and MUPED 705. Music Pedagogy in Higher Education I and II	6
MUS 701 and MUS 702. Analytical Techniques I and II	6
MUS 750, MUS 752, MUS 754 or MUS 756. Graduate Seminar (choose three)	9
MUS 751, MUS 753, MUS 755, MUS 757. Literature Labs	4
Approved electives in music theory or music history	3
Approved music electives	6
MUS 761. Three Recitals	9
MUS 762. Lecture Recital	3
MUS 763. Doctor of Musical Arts Document	3
	70

Additional requirements, such as qualifying exams, will be in the Graduate Handbook of the School of Music.

Concentrations

Concentrations require an additional 20 hours of course work.

Brass Area

Requirements	Credit Hours
MUPED 760. Applied Brass Pedagogy	3
MUS 703T. Solo Brass Literature	3
MUS 758. Brass Ensemble Literature	3
Approved Chamber Ensembles (two semesters)	2
Approved Large Ensembles	2
Approved Electives	7
	20

Conducting Area

Requirements	Credit Hours
MUS 707A, B, or C. Score and Literature Survey I	3
MUS 708A, B, or C. Score and Literature Survey II	3
MUS 730. Conductor Topics Seminar	4
MUAP 708. Doctoral Secondary Applied Conducting	2
MUS 703H, I or J. Seminar in Choral, Orchestral or Wind Literature for Conductors	2
Approved Electives	6
	20

Percussion Area

Requirements	Credit Hours
MUPED 750. Applied Percussion Pedagogy	3
MUS 703P. Solo Percussion Literature	3
MUS 704P. Percussion Ensemble Literature	2
MUS 706P. Percussion Ensemble Literature Lab [1]	1
MUAP 654. Percussion Ensemble	1
Approved Large Ensembles	7
Approved Electives	3
	20

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

Piano Area

Requirements	Credit Hours
MUPED 770, MUPED 771. Piano Pedagogy	3
MUS 703F. Seminar in Piano Literature	9
MUS 740. The German Lied for Pianists and Singers	4
MUAP 709. Graduate Piano Seminar	1
Approved Electives	3
	20

String Area

Requirements	Credit Hours
MUPED 725, MUPED 726. String Pedagogy	4
MUS 703D, MUS 703G. String Literature	6
MUAP 650. String Chamber Music Performance	2
MUAP 731. String Orchestral Excerpts	2
Approved Electives	6
To include MUPED 727, MUAP 699, additional MUAP 731	
	20

Vocal Area

Requirements	Credit Hours
MUPED 777, MUPED 778. Vocal Pedagogy	6
MUS 703A. Seminar in Solo Vocal Literature	4
MUS 703B. Opera Literature	3
Ensembles	2
Approved Electives	5
To include MUPED 779, MUS 740, MUAP 714	
	20

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.

Optional Singing Health Emphasis (in addition to the Performance Requirements for Vocal)

Minimum Requirements	Credit Hours
CSD 656. Voice Disorders	3
PSYC 601. Special Topics in Psychology: Performance Psychology	3
MUPED 777. Vocal Pedagogy I	3
MUPED 778. Vocal Pedagogy II	3
MUPED 780. Seminar in Singing Health Specialization	3
CSD 582. Intern Speech Practicum (clinical observation at the JMU/Rockingham Community Hospital Collaborative Voice and Swallowing Clinic)	1
Electives (choose two of the following):	6
CSD 604. Neuroanatomy and Neurophysiology of Speech and Language	
CSD 605. Physiological and Acoustical Phonetics	
PSYC 614. Advanced Developmental Psychology	
PSYC 622. Abnormal Psychology	
	22

This emphasis requires three undergraduate courses as prerequisites.

Undergraduate Prerequisites	Credit Hours
CSD 208. Anatomy and Physiology of the Ear and Voice Mechanism	3
CSD 209. Acoustics of Hearing and Speech	3
KIN 202. Biological Foundations of Kinesiology	3

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

Requirements	Credit Hours
MUPED 772, MUPED 773. Woodwind Pedagogy	4
Approved Large Ensembles	8
MUAP 651. Woodwind Ensemble	4
Approved Electives	4
Residency Qualifying Recital: At the end of the first year, the student will play in a thirty-minute recital for the woodwind faculty.	
	20

Woodwind Area: Multiple Woodwind Track

Requirements	Credit Hours
Applied instruction on a third instrument beyond the core applied instruction[1]	8
MUPED 672. Secondary Woodwind Instrumental Pedagogy	2
MUPED 772. Applied Woodwind Pedagogy	2
Approved Large Ensembles	8
Residency Qualifying Recital: At the end of the first year, the student will play in a thirty-minute recital for the woodwind faculty.	
	20

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).

Course Offerings

Music

MUS 520. Piano Technology. *1-2 credits.*
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 540. Jazz Improvisation Laboratory II. *1 credit.*
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 credits.*
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 credits.*
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 543-544. Counterpoint. *2 credits each semester.*
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 548. History and Literature of Wind Performance. *3 credits.*
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 Schwantner.

MUS 551-552. Music Composition. *2-3 credits each semester.*
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 credits.*
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 credits.*
An advanced survey of choral literature from the Romantic period through the present, including small and large form repertoire and a cappella and accompanied works. A thorough examination will be undertaken of the parallel trends in keyboard and instrumental music.

MUS 560. Piano Literature I. *2 credits.*
An advanced study of Baroque and Classical literature for the piano encompassing solo and concerto repertoire from literature for clavichord, harpsichord and pianoforte through the mature works of Beethoven.

MUS 564. Symphonic Literature. *3 credits.*
An advanced study of symphonic literature concentrating primarily on major composers and compositions from the Baroque Era to the present.

MUS 565. Opera History and Literature. *3 credits.*
An advanced study of the history of opera ca. 1600 through the 20th century.

MUS 567. Solo Vocal Literature. *3 credits.*
An advanced survey of specific areas of vocal literature to include the early English air, classic Italian art songs, the German lied, the French art song and contemporary art song.

MUS 570. Piano Literature II. *2 credits.*
An advanced study of Romantic, Impressionistic and 20th-century literature for the piano, including solo and concerto repertoire, with an emphasis on stylistic trends of the 20th century.

MUS 576. Music Theory Practices. *3 credits.*
Common-practice music theory with an introduction to 20th-century analysis. Current theory texts are examined.

MUS 598. Selected Topics in Music. *1-4 credits.*
Courses in music which are of a topical nature. May be repeated.

MUS 600. Research Methods. *3 credits.*
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 603P/703P. Solo Percussion Literature. *3 credits.*
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/704P. Percussion Ensemble Literature. *2 credits.*
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 composer.

MUS 606P. Percussion Ensemble Literature Lab. *1 credit.*
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 651-652. Music Composition. *2-3 credits each semester.*
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 credits.*
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. *1-3 credits.*
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 credits.*
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 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

MUS 699. Thesis Continuance. *2 credits.*
Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

MUS 700. Thesis Research. *1-6 credits.*
This course is graded on a satisfactory/unsatisfactory/incomplete (S/U/I) basis.

MUS 701. Analytical Techniques I. *3 credits.*
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. Analytical Techniques II. *3 credits.*
Schenker, set theory, and other contemporary analytical systems. *Prerequisite MUS 701 or permission of the instructor.*

MUS 703A. Seminar in Vocal Literature. *2 credits.*
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 MÃ©lodie, 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 credits.*
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 credits.*
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 the piano repertoire. May be repeated for credit when course content changes.

MUS 703G. String Chamber Music Literature. *3 credits.*
Study of string chamber music literature from its origins to the present.

MUS 703H. Seminar in Choral Literature for Conductors. *2 credits.*
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 credits.*
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 credits.*
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/603P. Solo Percussion Literature. *3 credits.*
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 credits.*
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/604P. Percussion Ensemble Literature. *2 credits.*
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 credit.*
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 707. Score and Literature Survey I. *3 credits.*
This course has been designed to give an overview of choral, orchestral or wind literature both from an 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.

MUS 707A. Score and Literature Survey for Choral Conductors I.

MUS 707B. Score and Literature Survey for Orchestral Conductors I.

MUS 707C. Score and Literature Survey for Wind Conductors I.

MUS 708. Score and Literature Survey II. *3 credits.*
This course functions as the continuation of MUS 707A, B or C. It is designed to give an overview of choral, orchestral or wind literature both from an 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 707 A, B or C.*

MUS 708A. Score and Literature Survey for Choral Conductors II.

MUS 708B. Score and Literature Survey for Orchestral Conductors II.

MUS 708C. Score and Literature Survey for Wind Conductors II.

MUS 710. Percussion Chamber Music Literature. *3 credits.*
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 730. Conductor Topics Seminar. *1 credit.*
This course has been designed to offer graduate conductors valuable perspectives, opinions, advice and discussion about various conducting topics, both musical and non-musical. Topics will include, but not be limited to: organizational skills, rehearsal techniques, gesture, programming, professional development, collaboration with other areas, pedagogy, presenting workshops and writing syllabi. The course will be taught by ensemble faculty and guest lecturers. May be repeated for credit.

MUS 740. The German Lied for Pianists and Singers. *2 credits.*
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 Seminar I. *3 credits.*
An advanced topical seminar in Early Music (to c. 1750). Topic and professor may change with each offering. *Prerequisite: Placement by diagnostic examination and MUS 600 or permission of the instructor.*

MUS 751. Literature Lab I. *1 credit.*
Survey of Early Music Repertoire (to 1750). Normally taken in the same semester with Graduate Seminar I.

MUS 752. Graduate Seminar II. *3 credits.*
An advanced topical seminar in Classical and early Romantic music. Topic and professor may change with each offering. *Prerequisite: Placement by diagnostic examination and MUS 600 or permission of the instructor.*

MUS 753. Literature Lab II. *1 credit.*
Survey of Classical and Early Romantic Repertoire. Normally taken in the same semester with Graduate Seminar II.

MUS 754. Graduate Seminar III. *3 credits.*
An advanced topical seminar in music from the late Romantic era to the present. Topic and professor may change with each offering. *Prerequisite: Placement by diagnostic examination and MUS 600 or permission of the instructor.*

MUS 755. Literature Lab II. *1 credit.*
Survey of repertoire from the late romantic era to the present. Normally taken in the same semester with Graduate Seminar III.

MUS 756. Graduate Seminar IV. *3 credits.*
An advanced topical seminar in Ethnomusicology, Popular Music and Jazz. Topic and professor may change with each offering. *Prerequisite: Placement by diagnostic examination and MUS 600 or permission of the instructor.*

MUS 757. Literature Lab IV. *1 credit.*
Survey of jazz and popular repertoire as well as selected world music. Normally taken in the same semester with Graduate Seminar IV.

MUS 758. Brass Ensemble Literature. *3 credits.*
Study of brass ensemble literature. Emphasis upon works for brass quintet and large brass ensemble, historical perspectives, aspects of performance practice techniques, performance of representative works and score analysis.

MUS 759. Aspects of Wind Performance. *2 credits.*
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 credits.*
A public performance of doctoral level repertoire. Will be repeated for credit. *Prerequisite: Instructor consent required.*

MUS 762. Doctor of Musical Arts Lecture Recital. *3 credits.*
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 students advisory committee. *Prerequisite: MUS 600.*

MUS 763. Doctor of Musical Arts Document. *1-3 credits. 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.*

Applied Music

Applied music instruction is offered in conducting, piano, voice, organ, harpsichord or an orchestral instrument. Permission to register for applied music must be granted by the appropriate applied division. Students in a performance concentration are expected to continue major study each semester enrolled.

MUAP 510. Applied Conducting. *1-2 credits.*
(Minor study and elective.)
Applied study, with limited ensemble assignment. May be required of conducting applicants not meeting all requirements for major study. Prerequisite: Permission of instructor.

MUAP 511. Applied Voice. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 512. Applied Piano. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 514. Ensembles. *0 credits.*
Any of the MUAP 500-level ensembles may be taken under this number for 0 credits if needed and with the adviser's recommendation. Most ensembles require an audition. May be repeated.

MUAP 516. Applied Viola. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 517. Applied Violoncello. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 518. Applied String Bass. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 520. Applied Flute. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 521. Applied Oboe. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 522. Applied Clarinet. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 523. Applied Bassoon. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 524. Applied Saxophone. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 525. Applied Trumpet. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 526. Applied Horn. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 527. Applied Trombone. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 528.Applied Euphonium. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. Prerequisite: Permission of instructor.

MUAP 529. Applied Tuba. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 530. Applied Percussion. *1-2 credits.*
Private applied study in minor area for non-degree students. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 535. Treble Chamber Choir. *1 credit.*
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 538. Concert Band. *1 credit.*
Ensembles are required in performance tracks and recommended as electives in other programs. In consultation with the adviser, students may elect this ensemble, which requires an audition. May be repeated.

MUAP 564. Camerata Strings. *1 credit.*
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 580/680. Collegium Musicum. *1 credit.*
The Collegium Musicum is a select vocal/instrumental ensemble dedicated to the historicall-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-level. Applied Music. *1-3 credits.*
(Major area for Master of Music students.)

MUAP 611. Applied Voice
MUAP 612. Applied Piano
MUAP 615. Applied Violin
MUAP 616. Applied Viola
MUAP 617. Applied Violoncello
MUAP 618. Applied String Bass
MUAP 619. Guitar Applied
MUAP 620. Applied Flute
MUAP 621. Oboe Applied
MUAP 622. Clarinet Applied
MUAP 623. Bassoon Applied
MUAP 624. Saxophone Applied
MUAP 625. Trumpet Applied
MUAP 626. Horn Applied
MUAP 627. Trombone Applied
MUAP 628. Euphonium Applied
MUAP 629. Tuba Applied
MUAP 630. Percussion Applied

MUAP 610. Applied Conducting. (Major study). *3 credits.*
Limited to advanced conductors. Applied study, with assignment to one or more ensembles.

MUAP 610A. Choral Conducting.
See course description for MUAP 610. Entrance based on demonstration of advanced competence in conducting and meeting entrance requirements in sight-singing, keyboard skills, and French, Latin, Italian and German diction.

MUAP 610B. Orchestral Conducting.
See course description for MUAP 610. Entrance to major instrumental study based on demonstration of advanced competence in conducting and meeting the entrance requirements in keyboard score reading skills and orchestration.

MUAP 610C. Wind Conducting.
See course description for MUAP 610. Entrance to major instrumental study based on demonstration of advanced competence in conducting and meeting the entrance requirements in keyboard score reading skills and orchestration.

MUAP 650. String Chamber Music Performance. *2 credits.*
Preparation and performance of string chamber music.

MUAP 680/580. Collegium Musicum. *1 credit.*
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 credit.*
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 credit.*
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 credits.*
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 credit.*
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 credit.*
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. *1-4 credits.*
Major area for Doctor of Musical Arts students. May be repeated for credit. *Prerequisite: Permission of instructor.*

MUAP 701-705. Secondary Applied Woodwind Lessons. *1-4 credits.*
One hour private lesson per week on secondary instrument. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 701. Doctoral Secondary Applied Flute

MUAP 702. Doctoral Secondary Applied Oboe

MUAP 703. Doctoral Secondary Applied Clarinet

MUAP 704. Doctoral Secondary Applied Bassoon

MUAP 705. Doctoral Secondary Applied Saxophone

MUAP 708. Doctoral Secondary Applied Conducting. *2 credits.*
Course consists 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 708A. Doctoral Secondary Applied Conducting – Choral

MUAP 708B. Doctoral Secondary Applied Conducting – Orchestral

MUAP 708C. Doctoral Secondary Applied Conducting – Wind Band

MUAP 709. Graduate Piano Seminar. *0-1 credits.*
This course is intended for all graduate piano majors. MUAP 709 will serve as a seminar for any topic related to performance, performance issues, career guidance, guest appearances, practice teaching, and preparation for public speaking and performing. Specific topics covered in MUAP 709 will change each semester, and the class is a requirement for all graduate piano majors in each semester of residence. May be taken for zero or one credit. *Prerequisite: Graduate Piano Performance major or permission of the instructor.*

MUAP 710. Doctoral Primary Applied Conducting. *4 credits.*
Course consists of a one-hour private lesson per week in the primary applied conducting medium. Lessons are arranged on an individual basis. DMA conducting students will be required to study and prepare significant levels of repertoire and will be expected to conduct a variety of ensembles both in rehearsal and in performance. *Prerequisite: Permission of instructor.*

MUAP 710A. Doctoral Primary Applied Conducting – Choral

MUAP 710B. Doctoral Primary Applied Conducting – Orchestral

MUAP 710C. Doctoral Primary Applied Conducting – Wind Band

MUAP 711. Applied Voice. *2-4 credits.*
One hour private applied voice lesson per week. Emphasis on vocal technique through repertoire. Student is expected to practice independently outside of the lessons. Higher credit option equates to increased practice expectation accompanied by larger completion of repertoire. *Prerequisite: Permission of instructor.*

MUAP 712-730. Doctoral Applied Lessons. *1-4 credits.*
One hour private lesson per week on primary instrument. Lessons are arranged on an individual basis. May be repeated. *Prerequisite: Permission of instructor.*

MUAP 712. Doctoral Applied Piano

MUAP 715. Doctoral Applied Violin

MUAP 716. Doctoral Applied Viola

MUAP 717. Doctoral Applied Violoncello

MUAP 718. Doctoral Applied String Bass

MUAP 720. Doctoral Applied Flute

MUAP 721. Doctoral Applied Oboe

MUAP 722. Doctoral Applied Clarinet

MUAP 723. Doctoral Applied Bassoon

MUAP 724. Doctoral Applied Saxophone

MUAP 725. Doctoral Applied Trumpet

MUAP 726. Doctoral Applied Horn

MUAP 727. Doctoral Applied Trombone

MUAP 728. Doctoral Applied Euphonium

MUAP 729. Doctoral Applied Tuba

MUAP 730. Doctoral Applied Percussion

Music Ensembles

MUAP 500-level Ensembles. *1 credit.*
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 535. Chorus

MUAP 537. Marching Band

MUAP 540. Chorale

MUAP 541. Madison Singers

MUAP 543. Opera Theater (1-2 credits)

MUAP 544. Chamber Orchestra

MUAP 545. Symphony Orchestra

MUAP 546. Wind Symphony

MUAP 547. Jazz Ensemble

MUAP 548. Jazz Band

MUAP 550. String Ensemble

MUAP 551. Woodwind Chamber Ensemble

MUAP 552. Brass Band.

MUAP 553. Guitar Ensemble

MUAP 554. Percussion Ensemble

MUAP 556. Flute Choir

MUAP 557. Piano Accompanying and Ensemble

MUAP 559. Keyboard Performance Practicum – Organ

MUAP 538. Concert Band. *1 credit.*
Ensembles are required in performance tracks and recommended as electives in other programs. In consultation with the adviser, students may elect this ensemble, which requires an audition. May be repeated.

MUAP 564 Camerata Strings. *1 credit.*
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 600-level Ensembles. *0-1 credits.*
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 and with the adviser's recommendation.

MUAP 635. Chorus

MUAP 637. Marching Band

MUAP 638. Concert Band

MUAP 640. Chorale

MUAP 641. Madison Singers

MUAP 643. Opera Theater

MUAP 644. Chamber Orchestra

MUAP 645. Symphony Orchestra

MUAP 646. Wind Symphony

MUAP 647. Jazz Ensemble

MUAP 648. Jazz Band.

MUAP 651. Woodwind Chambers Ensemble

MUAP 652. Brass Band

MUAP 654. Percussion Ensemble

MUAP 656. Flute Choir

MUAP 657. Piano Accompanying and Ensemble

MUAP 664. Camerata Strings

Music Education

MUED 501. Workshops in Music Education. *1-3 credits.*
Designed to provide a variety of workshop experiences; many workshops are particularly appropriate for teachers in elementary and secondary schools. The content of each will be determined by interest and demand.

MUED 570. Marching Band Procedures. *2 credits.*
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 571. Jazz and Show Choir Procedures. *2 credits.*
Skills and concepts needed to organize, administer, plan, teach and perform in jazz or show choirs will be taught. Techniques of commercial vocal style and choreography for the show choir will be covered.

MUED 598. Selected Topics in Music Education. *1-4 credits.*
Courses in music education which are of a topical nature. May be repeated.

MUED 660. Introduction to Graduate Study in Music Education. *1 credit.*
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 credit.*
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 credits.*
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. Research in Music Education. *2 credits.*
Understanding the principles and techniques of historical, descriptive, experimental and conceptual research. Planning original research. A thesis proposal is the final class requirement.

MUED 680. Document in Music Education. *3 credits.*
Final research project for music education majors who choose three credits of course work and a smaller document, rather than the thesis. Follows thesis procedure.

MUED 690. Special Studies in Music Education. *1-3 credits.*
Opportunity for supervised independent study in areas of special interest to the student. May be repeated for credit.

MUED 698. Comprehensive Continuance. *1 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

MUED 699. Thesis Continuance. *2 credits.*
Continued study, research and writing in the area of thesis concentration. Course may be repeated as needed.

MUED 700. Thesis Research. *1-6 credits.*
This course is graded on a satisfactory/unsatisfactory/incomplete (S/U/I) basis.

Music Pedagogy

MUPED 573. Projects in Private Piano Pedagogy. *2 credits.*
topics of special interest to the private piano teacher: overview of current methods, materials and repertoire for teaching beginning, intermediate and advanced students; teaching techniques and strategies; preparing students for college level piano study; business procedures for maintaining a private studio; electronic and computer aids in the piano studio.

MUPED 577. Vocal Pedagogy. *2 credits.*
An advanced survey of scientific and empirical approaches to vocal pedagogy.

MUPED 672. Secondary Woodwind Instrumental Pedagogy. *1 credit.*
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 I. *3 credits.*
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 credits.*
Students apply the knowledge gained in MUS 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 credits.*
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: Passing Score on Graduate Music Theory Entrance Exam or **MUS 576**. *Prerequisite or corequisite: MUPED 704.*

MUPED 725. String Pedagogy for Major Instrument I. *2 credits.*
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 credits.*
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 from beginning to intermediate levels. *Prerequisite: MUPED 725.*

MUPED 727. Pedagogy and Materials for Secondary String instruments. *1 credit.*
Provides pedagogy and literature materials for a secondary string instrument within the student's own instrument category (upper or lower strings).

MUPED 750. Applied Percussion Pedagogy. *3 credits.*
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 credits.*
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. *0-1 credits.*
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 credits.*
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 credits.*
Presentations of instrumental methods, solo and ensemble literature related to the woodwind performer's own major area. Private instruction approaches and techniques, student management, and chamber music coaching are also considered, with particular reference to the college-level student.

MUPED 773. Woodwind Pedagogy Practicum. *2 credits.*
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/interview preparation. *Prerequisite: MUPED 772.*

MUPED 777. Vocal Pedagogy I. *3 credits.*
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 credits.*
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. *1-2 credits.*
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 or corequisite: MUPED 777 or permission of instructor.*

Nursing

Nursing Department

(540) 568-6314 www.nursing.jmu.edu/

Department Head

Dr. Julie Sanford

Graduate Program Director

Dr. Patty Hale

D.N.P. Program Coordinator

Dr. Linda Hulton

Professors

P. Hale, L. Hulton, M. Mast, J. Sanford

Associate Professors

M. Bagnardi, M. DeValpine, S. Strang

Assistant Professors

A. Graham, A. Horigan, A. Knopp, C. Rubenstein, J. Strunk

Mission

We engage students, faculty and communities through dynamic and innovative nursing education, practice and scholarship to influence health in our world.

Purposes

In order to support and accomplish this mission the nursing faculty has identified the following purposes:

- Prepare nursing professionals who provide culturally competent, holistic, evidence-based nursing care to individuals, families, aggregates and communities in a wide variety of settings.
- Promote a community of learning that models professional values and lifelong professional development for both faculty and students.
- Promote service-learning activities that include collaborative, interdisciplinary initiatives and partnerships between nursing education and the practice arena to meet the future health needs of consumers.
- Conduct research and creative scholarship to generate nursing knowledge and disseminate that knowledge through collaboration, publication and presentations.

Accreditation

The Masters of Science in Nursing Program is fully accredited by the Commission on Collegiate Nursing Education (CCNE).

Programs of Study

The James Madison University Department of Nursing offers a Master of Science in Nursing and Doctor of Nursing Practice (D.N.P.).

The concentrations within the M.S.N. are:

- Adult/Gerontology Primary Care Nurse Practitioner (AGPCNP) (Not offered 2014-15.)
- Clinical Nurse Leader (CNL)
- Family Nurse Practitioner (FNP)
- Nurse Administrator (NA)
- Nurse Midwifery (in conjunction with Shenandoah University)

The D.N.P. at JMU is a practice-focused degree with an emphasis on the rigor of evidence-based practice grounded in research knowledge and the analysis of clinical and systems data. Students may choose from two areas of foci:

- Advanced Practice Nursing
- Leadership in Healthcare Systems

Doctorate of Nursing Practice

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 for nurses to provide high quality, patient and family-centered, accountable nursing care and to practice as a professional within an interprofessional team. The program's curriculum will consist of 40 to 44 credit hours including 1,000 course-related practice hours post-B.S.N., depending on the review of the applicant's transcripts. The D.N.P. is a practice-focused degree with an emphasis on the rigor of evidence-based practice grounded in research knowledge, interprofessional practice, and the analysis of clinical and systems data. Students may choose from two areas of foci: advanced practice nursing and leadership in healthcare systems. The curriculum is designed to meet the Essentials of Doctoral Education for Advanced Practice Nursing (AACN, 2006). The program's curriculum will consist of 40 to 44 credit hours including 1,000 course-related practice hours post-B.S.N., depending on the review of the applicant's transcripts.

Admission

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

- Hold a master's degree in nursing with a minimum 3.2 GPA for graduate work.
- Advanced Specialty Certification. For Nurse Administrator applicants, national certification is desired but not required. Other applicants should have the APRN (Advanced Practice Registered Nurse) designation in their home states and national board certification as a CNS, NP, CNM or CRNA in their areas of specialty (as appropriate). Applicants without national certification will be individually evaluated but must submit evidence of their specialty expertise.
- Have an unencumbered registered nurse licensure.
- Complete the online application for The Graduate School.
- Be admitted to The Graduate School.
- Have relevant clinical experience.
- Meet the department's technical standards for admission.
- Meet the department's disability accommodation standards.
- Provide a current resume or curriculum vitae
- Complete an interview upon request.
- Have health documentation and CPR certification.
- Statement of Professional Goals
- Provide three letters of recommendation: One from an academic reference; one from a current clinical supervisor and one from an additional academic or clinical reference.
- 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.

Application Deadline

Applications are processed on a rolling admission basis until the class fills. Applicants who apply prior to August 1 will be given first consideration.

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 Department of Nursing and the area of scholarly inquiry focus. Professional references will be reviewed, and an interview may be required.

Doctorate of Nursing Practice Requirements

All D.N.P. students complete the graduate courses.

Graduate Courses	Credit Hours
NSG 650. Organizational Behavior in Health Care	3
NSG 690. Epidemiology in Population Health	3
NSG 692. Health Policy for Practice and Advocacy	3
NSG 711. Analytic Methods for Health Care	3
NSG 712. Issues and Methods in Translational Inquiry	3
NSG 713. Evidence Based Practice: Clinical Prevention and Population Health	3
NSG 714. Evidence Based Practice: Chronic Illness	3
NSG 771. Advanced Practicum I [1]	3
NSG 772. Advanced Practicum II [1]	3-5
NSG 773. Advanced Practicum III [1]	3-5
NSG 800. Capstone Project	4
Cognates [2]	6
	40-44

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.

Master of Science in Nursing

The James Madison University Department of Nursing offers a Master of Science in Nursing degree with concentrations offered as:

- Adult/Gerontology Primary Care Nurse Practitioner (AGPCNP) (Not offered 2014-15.)
- Clinical Nurse Leader (CNL)
- Family Nurse Practitioner (FNP)
- Nurse Administrator (NA)
- Nurse Midwifery (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 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, 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. 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. Graduates of the NA concentration are eligible to take the Advanced Nurse Executive certification examination through the American Nurses Credentialing Center after holding an executive administrative position for 24 months.

The Master of Science in Nurse Midwifery 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.

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.
- Provide official MAT or GRE scores.
- Have relevant clinical experience.
- Have taken undergraduate courses in statistics and health assessment with a grade of "C" or higher.
- Meet the department'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.

Application Deadline

Applications are processed on a rolling admission basis until the class fills. Applicants who apply prior to April 1 will be given first consideration. Full and part-time students will enter the program in the fall or spring semester of each year.

Application Evaluation Criteria

Evaluation criteria includes previous academic and scholarly work, professional experience, MAT or GRE standardized test results, professional references, and a personal and professional goal statement and its relationship to the mission of the Department of Nursing. Professional references will be reviewed, and an interview may be required.

Master of Science in Nursing Requirements

All M.S.N. students complete the graduate core courses.

Graduate Core Courses	Credit Hours
NSG 520. Advanced Health Assessment [1]	3
NSG 521. Advanced Concepts in Pathophysiology [1]	3
NSG 522. Advanced Clinical Pharmacotherapeutics [1]	3
NSG 611. Research for the Advanced Health Professional	3
NSG 612. Theoretical Foundations of Advanced Nursing Practice	3
NSG 690. Epidemiology and Population Assessment	3
NSG 692. Health Policy for Practice and Advocacy	3
	21

1 NA concentration does not require NSG 520, NSG 521 or NSG 522.

Adult/Gerontology Primary Care Nurse Practitioner (AGPCNP) Curriculum

Courses	Credit Hours
Nursing Core Courses	21
NSG 630. Care Delivery and Coordination I	4
NSG 631. Care Delivery and Coordination II	4
NSG 632. Coordinated Care of the Elderly	3
NSG 634. Role of the Advanced Practice Nurse	1
NSG 671. Practicum I (150 practicum hours)	3
NSG 672. Practicum II (250 practicum hours)	5
NSG 673. Practicum III (250 practicum hours)	5
	46

Clinical Nurse Leader (CNL) Curriculum

Courses	Credit Hours
Nursing Core Courses	21
NSG 650. Organizational Behavior in Health Care	3
NSG 651. Leadership Development	3
NSG 653. Educational Methodologies for Nurse Leaders	3
NSG 676. Clinical Nurse Leader Practicum I (250 practicum hours)	4
NSG 677. Clinical Nurse Leader Practicum II (250 practicum hours)	4
	38

Family Nurse Practitioner (FNP) Curriculum

Courses	Credit Hours
Nursing Core Courses	21
NSG 630. Care Delivery and Coordination I	4
NSG 631. Care Delivery and Coordination II	4
NSG 632. Coordinated Care of the Elderly	3
NSG 634. Role of the Advanced Practice Nurse	1
NSG 635. Family Centered Care Delivery	3
NSG 671. Practicum I (150 practicum hours)	3
NSG 672. Practicum II (250 practicum hours)	5
NSG 673. Practicum III (250 practicum hours)	5
	49

Nurse Administrator (NA) Curriculum

Courses	Credit Hours
Nursing Core Courses	12
NSG 650. Organizational Behavior in Health Care	3
NSG 651. Leadership Development	3
NSG 655. Concepts for Nurse Administrators	3
NSG 678. Nursing Administration Practicum I (250 practicum hours)	4
NSG 679. Nursing Administration Practicum II (250 practicum hours)	4
Graduate Elective	3
	32

Nurse Midwifery Curriculum

Courses Taken at JMU	Credit Hours
Nursing Core Courses	21
NSG 634. Role of the Advanced Practice Nurse	1
	22

Courses Taken at Shenandoah University	Credit Hours
NM 610. Primary Care of Women	2(1)
NM 620. Comprehensive Antepartal Care	2(1)
NM 630. Midwifery Practicum	(3)
NM 640. Comprehensive Perinatal Care	2(1)
NM 651. Integrated Midwifery Internship	(5)
NM 652. Evidence-Based Practice Project	1
NM 660. NM Role Development	1
	7(12)

Course Offerings

Nursing

NSG 520. Advanced Health Assessment. *3 credits.*
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 credits.*
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 credits.*
Building upon the knowledge of pharmacology learned at the undergraduate level, this course examines concepts in pharmacotherapeutics necessary for advanced nursing 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 611. Research for the Advanced Health Professional. *3 credits.*
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 Practice Nursing. *3 credits.*
This course provides students with an opportunity to analyze and utilize nursing models and theories to explain advanced nursing practice. Students will explore advanced practice nursing from a theoretical standpoint and identify strategies for evaluating selected models and theories.

NSG 630. Care Delivery and Coordination I. *4 credits.*
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 health systems management, advanced health assessment, pathophysiology and pharmacology. Emphasis is placed on formulating diagnoses and plans of care that encompass client, family and coordinated systems of care. *Corequisite: NSG 520, NSG 521, NSG 522.*

NSG 631. Care Delivery and Coordination II. *4 credits.*
This course focuses on the evaluation, management and coordination of care for adolescent and adult clients with common chronic health deviations within a variety of contexts. The course builds on 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. *Prerequisites: NSG 520, NSG 521; Co-requisite NSG 522.*

NSG 632. Coordinated Care of the Elderly. *3 credits.*
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. *Prerequisites or corequisites: NSG 520, NSG 521 and NSG 522.*

NSG 634. Role of the Advanced Practice Nurse. *1 credit.*
This course will focus on historical and developmental aspects and competencies of advance practice nursing (APN), and the continuing evolution of the APN role. Students will explore the varied roles that APNs assume in the health care system and the legal and ethical considerations for advanced practice.

NSG 635. Family Centered Care Delivery. *3 credits.*
This course focuses on care given to the family unit, as well as 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. *Prerequisites: NSG 520, NSG 521 and NSG 522.*

NSG 650. Organizational Behavior in Health Care. *3 credits.*
This course focuses on theories, research, and frameworks that enhance the advanced practice 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 behavior management and change in health care systems.

NSG 651. Leadership Development. *3 credits.*
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 credits.*
This course will investigate the uses of appropriate teaching/learning principles and strategies for a variety of diverse populations. Current information, materials and technologies will be reviewed to facilitate and evaluate the learning of clients, groups, and health care professionals.

NSG 655. Concepts for Nurse Administrators. *3 credits.*
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. *Corequisites: NSG 650 and NSG 651.*

NSG 671. Practicum I. *3 credits.*
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. *Prerequisites: NSG 520, NSG 521 and NSG 630. Corequisite: NSG 522.*

NSG 672. Practicum II. *5 credits.*
Emphasis will be placed upon 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. *Prerequisites: NSG 630 and NSG 671.*

NSG 673. Practicum III. *5 credits.*
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 population. Clinical competencies will be emphasized to prepare the student for nurse practitioner certification. *Prerequisites: NSG 631 and NSG 672.*

NSG 676. Clinical Nurse Leader Practicum I. *4 credits.*
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. *Prerequisites: NSG 650 and NSG 651. Corequisites: NSG 653.*

NSG 677. Clinical Nurse Leader Practicum II. *4 credits.*
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. *Prerequisites: NSG 650 and NSG 651. Corequisites: NSG 653.*

NSG 678. Nursing Administration Practicum I. *4 credits.*
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. *Prerequisites: NSG 650 and NSG 651. Corequisites: NSG 655.*

NSG 679. Nursing Administration Practicum II. *4 credits.*
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. *Prerequisites: NSG 650 and NSG 651. Corequisites: NSG 655.*

NSG 680. Independent Study in Nursing. *1-3 credits.*
This course provides the opportunity for independent study in a specialized area of concentration. It is conducted under the supervision of a faculty member. *Prerequisites: Approval of graduate program coordinator and department head.*

NSG 690. Epidemiology and Population Assessment. *3 credits.*
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. It addresses health systems that focus on health promotion and disease prevention.

NSG 692. Health Policy for Practice and Advocacy. *3 credits.*
This course addresses the foundation of health policymaking. It emphasizes policy analysis for 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 or 6 credits.*
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. For FNP students, corequisite: NSG 635.*

NSG 711. Analytical Methods for Health Care. *3 credits.*
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 & Methods in Translational Inquiry. *3 credits.*
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.

NSG 713. Evidence Based Practice: Health Promotion. *3 credits.*
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 credits.*
This course addresses best practices for chronic disease care. Chronic Illness is highly prevalent, costly, and preventable. Issues resulting from chronic illness are explored. 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. *3 credits.*
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 practice and applies findings in the provision of client and population focused interventions.

NSG 772. Advanced Practicum II. *3 or 5 credits.*
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 care.

NSG 773. Advanced Practicum III. *3 or 5 credits.*
In Practicum III students synthesize and expand learning developed to this point, and demonstrate mastery of advanced practice at a high level of complexity. The course provides the practice context within which the final D.N.P. project is completed.

NSG 800. Capstone Project. *4 credits.*
For the scholarly capstone project students systematically use evidence to improve either practice or patient care outcomes within an advanced nursing practice specialty. The project produces a tangible and deliverable product that summarizes the student's growth in knowledge and expertise and is evaluated by an academic committee.

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.*

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.*

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: NM640.*

NM 652. Evidence-Based Practice Project. *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: NM640, NMLB640.*

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.*

* 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.

Occupational Therapy

Occupational Therapy
(540) 568-2399 www.healthsci.jmu.edu/occupationaltherapy

Academic Unit Head
Dr. Allen Lewis

Graduate Program Director
Dr. Amy Russell Yun

Professor
J. Thompson

Associate Professor
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Assistant Professors
J. Wenos, A. Russell Yun

Instructor
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Admission

The Master of Occupational Therapy (M.O.T.) is a professional master's degree designed for entry-level generalist preparation of the occupational therapist. One cohort of students is admitted each year. Classes begin in June. The design of the program is a 2.5 year model with two routes of entry:

Graduate

Applicants with a bachelor's degree must submit application to the JMU Graduate School.

JMU students applying during their senior year must submit an application to the JMU graduate school. Refer to the Occupational Therapy program website for updated information.

Undergraduate: JMU Health Sciences Early-Entry

Students currently enrolled at JMU as health sciences majors with a concentration in health studies may apply to the M.O.T. program during their third year of undergraduate course work in a process known as the early-entry program.

Students must:

- have completed 85 hours of undergraduate credit in order to start the program after their third year.
- have completed all prerequisite courses, including all general education courses.
- be accepted to the M.O.T. program and to The JMU Graduate School.
- take GRE exams (verbal, quantitative and writing) by November 15 of the junior year and submit scores to the Graduate School at JMU.
- complete the additional 1.5 years of course work as graduate students after completing the first year courses as undergraduate students.

Application Deadlines

Applications submitted by the due date are reviewed first and given earliest consideration for admission into the program. Applications received after the deadline will only be considered if enrollment permits. (Incomplete applications will not be reviewed).

The application deadline is January 10.

Graduate Students

Application must be submitted online to the JMU Graduate School. Check the program website for updated information. The JMU M.O.T. program does not participate in the Occupational Therapy Centralized Application Service (OTCAS).

Undergraduate Students

JMU undergraduate students in health sciences with a health studies concentration may apply for admission to the Occupational Therapy program during their junior year under the early-entry option. Students accepted to the early-entry program are accepted by The Graduate School (on a contingent basis pending completion of their undergraduate degree) and the occupational therapy program, but remain as undergraduate students during the first year in the program. Upon acceptance to The Graduate School and the M.O.T. program, students in the early-entry program become health sciences majors with a concentration in occupational studies to complete the bachelor's degree.

For additional information, contact the occupational therapy program office at (540) 568-2399.

Admission Requirements

Admission is limited and competitive. Students applying to the program with a baccalaureate degree will enter the program directly as graduate students. Successful completion of 79 graduate credits will result in earning the M.O.T. degree.

JMU students admitted as juniors under the early-entry option will complete all required classes in the occupational studies concentration (35 credits) as undergraduate students to complete their bachelor's degree. Upon completion of the undergraduate degree/first year M.O.T. program requirements,

students become graduate students and complete their remaining 44 graduate credits for the M.O.T. degree. Students must meet all requirements of The Graduate School and the first year requirements of the occupational studies concentration in order to advance to the graduate level.

Admission Requirements for Graduate Students

To be considered for admission to the M.O.T. program, prospective students must:

- Have earned an undergraduate degree prior to classes beginning.
- Submit Graduate Record Examination (GRE) scores in verbal, quantitative and writing to the JMU Graduate School.
- Be admitted to the JMU Graduate School. Students with an earned undergraduate degree will apply to the M.O.T. program online through the JMU Graduate School.
- Have a minimum preferred cumulative grade point average of 3.0 or better and meet all prerequisite course requirements with a grade of "C" (2.0) in the following courses: NOTE: These are JMU courses and numbers. Students not attending JMU as undergraduates may request that courses with similar content be substituted for the specific courses listed. Transcripts and syllabi of the courses should be supplied for the review of content. The admissions committee of the occupational therapy program will determine if the courses meet the prerequisite requirements.
- Applicants must achieve a grade of "C" (2.0) or higher in the following courses:
  - BIO 270. Human Physiology
  - BIO 290. Human Anatomy
  - *G*PSYC 160. Life Span Human Development
  - PSYC 250. Intro to Abnormal Psychology
  - HTH 408. Health Research Methods
  - GANTH 195. Cultural Anthropology
  - GSOCI 140. Individual in Society or GSOCI 110. Social Issues in a Global Context
  - HTH 210. Medical Terminology
  - HTH 441. Rehabilitative Biomechanics or comparable physics or kinesiology course
  - MATH 220. Elementary Statistics
- Submit documentation of a minimum forty hours of observation of occupational therapy services.
- Submit three reference forms: one from an employer or non-relative and one or more from an instructor. Request references online while completing the Graduate School application.
- Submit an autobiographical statement of 1,500 words or less. Refer to the JMU M.O.T. program website for specific instructions regarding this assignment.

Applicants can be completing prerequisite courses when they apply to the program but no more than three prerequisite courses may be left to complete when an application is submitted for consideration of admission. All prerequisite courses must be completed prior to beginning course work in the M.O.T. Program. Graduate applicants must demonstrate computer competency information-seeking skills.

A visit to the JMU Occupational Therapy program is strongly recommended for candidates who plan to apply. Applicants should be familiar with the JMU M.O.T. Program, the curriculum, and length of study, as well as all financial responsibilities as an in-state or out-of-state student.

Admission Requirements for Early-Entry JMU Undergraduates

To be considered for admission through the early-entry program, prospective students must:

- Be a JMU undergraduate major in health sciences with a concentration in health studies.
- Complete a minimum of 85 credits by the end of the junior year, including all general education requirements.
- Complete the following occupational studies prerequisite courses with a grade of "C" (2.0) or higher:
  - *G*SOCI 140. Microsociology: The Individual in Society or *G*SOCI 110. Social Issues in a Global Context
  - *G*ANTH 195. Cultural Anthropology (or an anthropology-focused course)
  - BIO 270. Human Physiology (with lab)
  - BIO 290. Human Anatomy (with lab)
  - HTH 441. Rehabilitative Biomechanics (or a comparable physics or kinesiology course)
  - MATH 220. Elementary Statistics
  - *G*PSYC 160. Life Span Human Development
  - PSYC 250. Introduction to Abnormal Psychology
  - HTH 210. Medical Terminology
  - HTH 408. Research Methods

Students who are seeking a JMU undergraduate health sciences degree in occupational studies must complete all General Education requirements and the following additional health sciences core courses by the end of spring semester in the year offered admission into the occupational studies program.

- *G*HTH 100. Personal Wellness
- CHEM 120. Concepts of Chemistry (lecture only)
- HTH 245. Foundations of Infectious Disease
- NUTR 280. Nutrition for Wellness
- HTH 320. Statistical Methods for Health Sciences Research
- HTH 351. Health Behavior Change

- HTH 354. US and Global Health Care Systems
- HTH 450, Epidemiology

The charts below show the recommended schedule for students desiring admission into occupational studies concentration in their senior year.

First Year	Credit Hours
General Education courses	18
CHEM 120. Concepts of Chemistry	3
*G*ANTH 195. Cultural Anthropology	3
*G*HTH 100. Personal Wellness	3
*G*PSYC 160. Life Span Human Development	3
	30

Second Year	Credit Hours
*G*SOCI 110. or *G*SOCI 140. Sociology	3
*G*HIST 225 U.S. History or *G*POSC 225 U.S. Government or *G*JUST 225 Justice and American Society	3
MATH 220. Elementary Statistics	3
HTH 210. Medical Terminology	3
PSYC 250. Intro to Abnormal Psychology	3
HTH 245. Foundations of Infectious Disease	3
NUTR 280. Nutrition for Wellness	3
HTH 354. US & Global Health Care Systems	3
HTH 351. Health Behavior Change	3
BIO 290. Human Anatomy	4
	31

Third Year	Credit Hours
HTH 320. Statistical Methods for HS Research	3
BIO 270. Human Physiology	4
HTH 441. Rehabilitative Biomechanics	3
HTH 408. Research	3
HTH 450. Epidemiology	3
Electives	8
	24

- Submit documentation of a minimum 40 hours of observation of occupational therapy services (see form in application packet).
- Take the GRE exams (verbal, quantitative, and writing) by November 15 of the junior year and submit scores to The Graduate School at JMU.
- Complete successful application to the M.O.T program including application to the M.O.T. program and to The Graduate School. Although accepted by The Graduate School, entry to the graduate level of the M.O.T program will be delayed one year from application to allow students to complete the undergraduate degree.
- Submit three reference forms (reference forms can be found on the JMU M.O.T. program website): one from an employer or non-relative and one or more from an instructor. Reference letters (rather than the provided forms) will not be accepted.
- Submit an autobiographical statement of 1,500 words or less. Refer to the JMU M.O.T website for specific instructions regarding this assignment.
- Meet all ISST requirements and requirements in computer competency as required by the university and stated in the general education requirements in the JMU Undergraduate Catalog.

Application Evaluation Criteria

Candidates are evaluated through review of their written application. The following characteristics, skills and accomplishments are assessed:

- Academic preparation (overall GPA, prerequisite GPA).
- Autobiographical statement. (See program website for further information)
- Written communication skills.
- Volunteer/health and human services experience (Volunteer Form – 40 hours minimum).
- Three references using reference form (not letters).
- 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.
- Degree of professional behavior and maturity during the student's advising and application process.

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 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, or at colleges or universities as faculty.

Accreditation

Effective December 6, 2013, the occupational program was granted full accreditation for a period of ten years (2012/13- 2022/23) by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA) located at 4720 Montgomery Lane, PO Box 31220, Bethesda, MD 20824-1220. AOTA's phone number is (301) 652-AOTA.

With full ACOTE accreditation, graduates of the program can register to take the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy (NBCOT). Satisfactory performance on this exam is the basis for regulation of practice of occupational therapy in most states and allows the graduate to become an Occupational Therapist Registered (OTR). Students are advised to check the requirements for practice for any state they are interested in. The licensing and regulatory authority in Virginia is the Virginia Board of Medicine- Department of Health Professions. A prior felony conviction may affect the graduate's ability to sit for the NBCOT exam and/or attain state licensure.

NBCOT
12 South Summit Avenue
Suite 100
Gaithersburg, MD 20877-4150
(3010 990-7979

Virginia Board of Medicine
9960 Maryland Drive
Suite 300
Richmond, VA 23233-1463
(804) 367-4600

Curriculum

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 standpoint in a manner that is consistent with JMU Graduate School and Occupational Therapy Program policies.

Occupational Therapy Degree Requirements

Summer: Year One (6 weeks)	Credit Hours
HTH 409/OT 510. Therapeutic Interaction	3
HTH 431/OT 530. Human Occupational and the Foundations of the Profession	3
HTH 445/OT 540. The Occupational Therapy Process	3
	9

Fall: Year One	Credit Hours
HTH 424/OT 520. Occupational Development through the Lifespan	3
BIO 414/BIO 514. Functional Anatomy for Occupational Therapists	4
BIO 440/BIO 540. Functional Neuroscience	3
HTH 461/OT 561. Therapeutic Media in Occupational Therapy	2
	12

Spring: Year One	Credit Hours
HTH 435/OT 555. Level I Fieldwork One	1
HTH 460/OT 560. Sensorimotor Foundations of Occupation	3
HTH 478/OT 580. Occupational Dysfunction: Cause and Impact	3
HTH 479/OT 590. Foundations of Research in Occupational Therapy	3
HTH 485/OT 585. Psychosocial Perspectives in Occupational Therapy Practice	3
HTH 491/OT 591. Occupational Therapy Tutorial Group I	1
	14

Students enrolled in the program at the undergraduate level would receive a Bachelor of Science degree in health sciences at this time. These students would have the option of earning a minor in gerontology, substance abuse or special education (non-teaching) if appropriate course work is completed.

Summer: Year Two	Credit Hours
OT 538. Administrative Functions for OT's	3
	3

Fall: Year Two	Credit Hours
OT 600. Assistive Technology in Occupational Therapy Practice	3
OT 610. Occupational Therapy Intervention in Pediatrics	3
OT 620. School Based Practice	2
OT 630. Evidence Based Practice	3
OT 645. Level I Fieldwork Two	1
OT 691. Occupational Therapy Tutorial Group II	1
	13

Spring: Year Two	Credit Hours
OT 640. Occupational Therapy Intervention Throughout Adulthood	4
OT 651. Community and Health Practice in Occupational Therapy	4
OT 655. Level I Fieldwork Three	1
OT 692. Occupational Therapy Tutorial Group III	1
	10

Summer: Year Two	Credit Hours
OT 663. Policy Analysis and Systems of Service Provision	3
OT 665. Level II Fieldwork One (12 week placement)	6
	9

Fall: Year Three	Credit Hours
OT 675. Level II Fieldwork Two (12 week placement)	6
OT 680. Independent Study	3
	9

Note: Level II fieldwork must be completed within 24 months of completion of didactic course work.

Students would receive a master's of occupational therapy degree at December commencement once they conclude all academic and clinical course work.

Course Offerings

Occupational Therapy

OT 510. Therapeutic Interaction. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
The occupational therapy process is taught. Types, purposes and methods of assessment are taught as the initial and defining stop 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 credit.*
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. *Prerequisites: 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 Occupation. *3 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
Reasons for occupational dysfunction in the areas of development, trauma, disease, degenerative and environmental conditions are examined in relation to their specific pathology and their effect on human occupational performance. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 Group I. *1 credit.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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 is stressed. The early intervention programs as designed under IDEA are included. *Prerequisites: 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 credits.*
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). *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credit.*
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. *Prerequisites: 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 credits.*
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 and 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. *Prerequisites: 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 credit.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credit.*
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 credit.*
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 Studies

Physician Assistant Studies

(540) 568-2395 www.jmu.edu/heathsci/paweb

paprogram@jmu.edu

Academic Unit Head

Dr. Alan Lewis

Graduate Program Director

Mr. Gerald Weniger, PA-C, ATC

Associate Professor

P. Bailey

Assistant Professors

S. Maiewski, E. Kancler, K. Liskey

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 September 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. By their very nature, 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 does 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, please consult the "International Student Applications" section of the Graduate Catalog for additional features of the application process.

Application Deadlines

One cohortof 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 September 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 (Overall GPA, science GPA, non-science GPA, prerequisite and recent course work).
- Communication skills (Written application, personal essay, speaking and listening skills at interview).
- Career plans/concept of the PA profession (Written application and interview).
- Health care experience (Written application and interview).
- Professionalism – maturity of insight, judgment, problem-solving (Interview).
- Self-awareness, self-confidence, motivation (Application and interview).
- Service to society (Written application and interview).
- Fit with the JMU PA Program mission and operation (Interview).

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.

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.

Physician Assistant Degree Requirements

Fall Semester Year One	Credit Hours
BIO 513. Human Gross Anatomy with Clinical Applications	6
BIO 516. Pathophysiology I	4
PA 510. Physical Diagnosis I	3
PA 540. The Physician Assistant Profession	1
	14

Spring Semester Year One	Credit Hours
BIO 517. Pathophysiology II	3
PA 520. Clinical Medicine I	5
PA 532. Pharmacology for PAs I	3
PA 551. Managing Medical Information I: Clinical Biostatistics	3
	14

Summer Session Year One (12 weeks)	Credit Hours
HTH 659. Health Care Environment	3
PA 511. Physical Diagnosis II	2
PA 621. Clinical Medicine II	3
PA 623. Pediatric Medicine	2
PA 624. Behavioral Medicine	2
PA 630. Clinical Laboratory Medicine I	2
	14

Fall Semester Year Two	Credit Hours
PA 622. Women's Medicine	2
PA 626. Clinical Medicine III	2
PA 631. Clinical Laboratory Medicine II	2
PA 633. Pharmacology for PAs II	3
PA 652. Managing Medical Information II: Clinical Problem Solving	3
PA 653. Managing Medical Information III: Research Design and Implementation	1
	13

Spring Semester Year Two	Credit Hours
PA 625. Health Promotion and Disease Prevention	1
PA 654. Managing Medical Information IV: Directed Project	2
Rotation Period 1	2
Rotation Period 2	2
Rotation Period 3	2
	9

Summer Session Year Two	Credit Hours
PA 643. Values in Primary Care	3
Rotation Period 4	2
Rotation Period 5	2
Rotation Period 6	2
	9

Fall Semester Year Three	Credit Hours
PA 642. Transition to Practice	1
Rotation Period 7	2
Rotation Period 8	2
Rotation Period 9	2
Rotation Period 10	2
	9
Total degree credits	82

Rotating Courses

These courses rotate during the ten Clinical Rotation Periods. The sequencing of these courses will vary with each student.

Course	Length
PA 670. Elective Rotation	4 weeks
PA 671. Family Medicine Clinical Rotation I	4 weeks
PA 672. Family Medicine Clinical Rotation II	4 weeks
PA 673. Internal Medicine Clinical Rotation I	4 weeks
PA 674. Internal Medicine Clinical Rotation II	4 weeks
PA 675. Pediatrics Clinical Rotation	4 weeks
PA 676. Obstetrics and Gynecology Clinical Rotation	4 weeks
PA 677. General Surgery Clinical Rotation	4 weeks
PA 678. Emergency Medicine Clinical Rotation	4 weeks
PA 679. Behavioral Medicine Clinical Rotation	4 weeks

Course Offerings

Physician Assistant

PA 510. Physical Diagnosis I. *3 credits.*
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. *Prerequisites: Admission to physician assistant program, or permission of program director.*

PA 511. Physical Diagnosis II. *2 credits.*
This is the second 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. *Prerequisites: 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. *5 credits.*
This is the first 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. *Prerequisites: 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 for Physician Assistants I. *3 credits.*
This is the first 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 also includes principles of prescribing and patient compliance. *Prerequisites: 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 credit.*
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. *Prerequisites: Admission to physician assistant program, or permission of program director.*

PA 551. Managing Medical Information I: Clinical Biostatistics. *3 credits.*
This is the first in a four-course series 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. *Prerequisites: 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. *3 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credit.*
The 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. *Prerequisites: 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. *2 credits.*
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.

PA 630. Clinical Laboratory Medicine I. *2 credits.*
This is the first of 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. *Prerequisites: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 631. Clinical Laboratory Medicine II. *2 credits.*
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. *Prerequisites: 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 for Physician Assistants II. *3 credits.*
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 also includes principles of prescribing and patient compliance. *Prerequisites: 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 credit.*
This course examines issues related to the shift from the role of 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. *Prerequisites: 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 in Primary Care. *3 credits.*
This course provides an overview of professional ethics as they apply to primary care practice for physician assistants. The focus is on major principles and methodologies that guide clinicians in ethical decision-making as they encounter situations common to primary care practice. *Prerequisites: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 652. Managing Medical Information II: Clinical Problem Solving. *3 credits.*
This is the second in a four-course series 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. *Prerequisites: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 653. Managing Medical Information III: Research Design and Implementation. *1 credit.*
This is the third in a four-course series 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 design an individual senior project that will be implemented and presented in PA 654. *Prerequisites: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 654. Managing Medical Information IV: Directed Project. *2 credits.*
This is the fourth in a four-course series designed to provide the physician assistant student with skills to understand research design, analyze research information and apply it to clinical practice. Utilizing a study question or research protocol generated in PA 653 students will collect and synthesize information culminating in a class presentation and paper suitable for publication. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
This is the first of two four-week clinical rotations in family medicine. 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. *Prerequisites: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

PA 672. Family Medicine Clinical Rotation II. *2 credits.*
This is the second of two four-week clinical rotations in family medicine. 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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: 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 credits.*
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. *Prerequisites: Admission to the physician assistant program and successful completion of all previous courses in the curriculum, or permission of the program director.*

Political Science

Department of Political Science
(540) 568-6149 www.jmu.edu/polisci/eurounionpolicy.html

Department Head
Dr. Charles H. Blake

Graduate Program Director
Dr. John Scherpereel

Academic Coordinator
Caterina Paolucci

Professors
J. Adolino, C. Blake, S. Hammond, V. Sulfaro

Associate Professors
K. Ferraiolo, T. LaPira, J. Scherpereel

Assistant Professors
J. Hulsey

Admission Criteria and Degree Requirements

The JMU graduate school requires that prospective students submit official transcripts of all undergraduate and graduate course work and GRE test scores. 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, GRE writing 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 [1]	Credit Hours
POSC 602. The Politics of European Culture and Identity	3
POSC 603. The Political Institutions of the European Union	3
POSC 604. Policy-Making Processes and Lobbying in the European Union	3
POSC 620. The EU: Contemporary Issues and Controversies	3
POSC 640. Seminar in EU Policy Analysis	6
POSC 641. Topics in Economic and Social Policy [1]	3
POSC 642. Topics in Foreign Policy and Internal Security [1]	3
POSC 690. Tutorial in EU Policy Studies	6
POSC 692. EU Seminar	3
	33

1 In their area of policy specialization, students will take one course twice (with different topics) for a total of six credits.

Typical Curriculum for European Union Policy Studies

Fall Semester [1]	Credit Hours
POSC 602. The Politics of European Culture and Identity	3
POSC 603. The Political Institutions of the European Union	3
POSC 604. Policy-Making Processes and Lobbying in the European Union	3
POSC 620. The EU: Contemporary Issues and Controversies	3
	12

Spring Semester	Credit Hours
POSC 640. Seminar in EU Policy Analysis	6
POSC 641. Topics in Economic and Social Policy [1]	3-6
POSC 642. Topics in Foreign Policy and Internal Security [1]	3-6
	12

Summer Semester	Credit Hours
POSC 690. Tutorial in EU Policy Studies	6
POSC 692. EU Seminar	3
	9

1 In their area of policy specialization, students will take one course twice (with different topics) for a total of six credits.

Course Offerings

Political Science

POSC 601. Theories of European Integration. *3 credits.*
This course is a comprehensive introduction to normative and empirical theories of European integration. It covers the "European visions" of historical figures and the history of European integration since World War II. The course requires intensive analysis of twentieth and twenty-first century empirical theories of integration, including neofunctionalism, intergovernmentalism, historical institutionalism, multi-level governance, constructivism and Europeanization.

POSC 602. The Politics of European Culture and Identity. *3 credits.*
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 credits.*
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 and Lobbying in the European Union. *3 credits.*
This course examines the range of policy-making processes that characterize EU decision-making and focuses on the ways that groups beyond the EU's formal institutions influence EU policies. The course analyzes the ways that the EU's policy regimes affect extra-institutional actors' strategies. It focuses on the strategies of interest groups, media outlets, states from outside of the EU, social movements, international organizations, and other extra-institutional actors.

POSC 620. The EU: Contemporary Issues and Controversies. *3 credits.*
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, this 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 credits.*
In-depth examination of apecialized 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 credits.*
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 credits.*
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 and Public Policy. *3 credits.*
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. Seminar in EU Policy Analysis. *6 credits.*
This course offers an intensive immersion into the methods and concepts of EU policy analysis. It introduces students to policy-analysis techniques, requires students to apply those techniques in case-based projects, and allows students to present and defend policy analyses to public audiences.

POSC 641. Topics in Economic and Social Policy. *3 credits.*
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 credits.*
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 665. Governance and Stabilization. *3 credits.*
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 credits.*
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 course work 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 credits.*
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. Course work includes speakers, roundtable discussions, research colloquia and study tours.

Graduate Psychology

Department of Graduate Psychology

(540) 568-6439 www.psyc.jmu.edu/gradpsyc/

Department Head

Dr. Robin Anderson

Assessment and Measurement Graduate Program Director

Dr. Deborah Bandalos

Clinical and Mental Health Counseling Program/School Counseling Graduate Program Director

Dr. Debbie Sturm

College Student Personnel Administration Graduate Program Co-Directors

Dr. Joshua Bacon Ms. Donna Harper

Combined-Integrated Clinical and School Psychology Graduate Program Director

Dr. Gregg Henriques

Counseling and Supervision Graduate Program Coordinator

Dr. Lennis Echterling

Psychological Sciences Graduate Program Director

Dr. Michael Hall

School Psychology Graduate Program Director

Dr. Tammy Gilligan

Professors

R. Anderson, D. Bandalos, A. J. Benson, J. Brewster, M. Kielty, E. Cowan, C. DeMars, L. Echterling, T. Gilligan, T. Gonzalez, R. Harmison, G. Henriques, J. E. McKee, J. Presbury, S. Rogers, T. Schulte, C. Shealy, A. R. Staton, A. Stewart, T. Stokes, M. Stoloff, D. Sundre, A. Trice, P. Warner, R. West

Associate Professors

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Assistant Professors

J. Bacon, M. Erbacher, J. Hathcoat, D. Kipps-Vaughan, J. McConnel, C. Meixner, E. Savina, D. Strum

Instructors

D. Barnes, H. Brown, G. Griffin, T. Hakala, D. Harper, R. Mitchell

Application Dates

Refer to individual programs for application requirements. Programs may require a criminal history check as part of the final admissions process.

Assessment and Measurement Doctoral Program

The application date for the fall semester is January 15. All application forms and supporting materials are due at this time.

Combined-Integrated Clinical and School Psychology Doctoral Program

The application date for the fall semester is February 1. All application forms and supporting materials are due at this time.

Counseling: College Student Personnel Administration

The application date for the fall semester is January 15. The program will give preference to applications received by this date. The committee conducts screening interviews in February.

Counseling: Clinical Mental Health and School Counseling

The application date for the fall semester 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.

Counseling: Counseling and Supervision Doctoral Program

The application date for the fall semester 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.

Psychological Sciences

The application date for the fall semester is January 4. All application forms and supporting materials are due at this time. The program conducts screening interviews in February.

School Psychology

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

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.

Overview

James Madison University offers eight graduate programs designed for individuals who want to pursue advanced training in psychology and counseling. These programs share the goals of academic enrichment, refinement of research skills, development of applied skills, and personal and professional growth.

Programs

- Assessment and Measurement (Ph.D.)
- Combined-Integrated Clinical and School Psychology (Psy.D.)
- Counseling: College Student Personnel Administration (M.Ed.), 36 credits
- Counseling: Counseling and Supervision (Ph.D.)
- Counseling: Clinical Mental Health (M.A. and Ed.S.), 60 credits
- Counseling: School Counseling (M.Ed.), 54 credits
- Psychological Sciences (M.A.), 36 credits
- School Psychology (M.A. and Ed.S.), 78 credits

Counseling Programs

The Graduate Psychology Department offers M.Ed. and M.A./Ed.S. degrees in counseling with three available concentrations:

- Clinical Mental Health Counseling
- College Student Personnel Administration
- School Counseling

The department also offers a Ph.D. degree in Counseling and Supervision.

Clinical Mental Health Counseling Program

Program Director: Dr. Debbie Sturm

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. Finally, 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.

Clinical Mental Health Educational Specialist Degree Requirements

Minimum Requirements	Credit Hours
PSYC 600. Introduction to Measurement and Statistics	3
PSYC 607. Assessment Procedures in Counseling	3
PSYC 614. Advanced Developmental Psychology	3
PSYC 630. Clinical Mental Health Counseling	3
PSYC 660. Counseling Theories	3
PSYC 661. Counseling Techniques	3
PSYC 663. Substance Abuse Counseling	3
PSYC 664. Counseling Process	3
PSYC 665. Group Counseling	3
PSYC 668. Couple and Family Systems	3
PSYC 669. Career Development	3
PSYC 685. Psychopathology: Diagnosis and Intervention Planning	3
PSYC 695. Practicum in Counseling	3
PSYC 710. Counseling Strategies	3
PSYC 749. Multicultural Perspectives of Intervention	3
PSYC 760. Supervision and Consultation for Counselors	3
PSYC 790. Internship	6
Research Project/Thesis	3
Choose one of the following:	
PSYC 800. Educational Specialist Research Project [1]	
PSYC 700. Thesis Research	
(Note: Thesis option requires an additional 3 credit hours)	
Elective course (adviser approval required)	3
	60

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.

College Student Personnel Administration Program

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.

College Student Personnel Administration Master of Education Degree Requirements

Minimum Requirements	Credit Hours
AHRD 670. American Higher Education	3
PSYC 600. Introduction to Measurement and Statistics	3
PSYC 645. Student Personnel Services	3
PSYC 646. The American College Student	3
PSYC 649. Multiculturalism, Diversity and Difference	3

PSYC 650. Organization and Administration of Student Services	3
PSYC 651. Supervision and Consultation Processes in Student Personnel	3
PSYC 660. Counseling Theories	3
PSYC 661. Counseling Techniques	3
PSYC 665. Group Counseling	3
PSYC 695. Field Practicum in Student Personnel Administration	3
PSYC 669. Career Development	3
	36

College Student Personnel Certificate Program

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) from the list of existing courses:

- PSYC 645. Student Personnel Services
- PSYC 646. The American College Student
- PSYC 649. Multiculturalism, Diversity and Difference
- PSYC 650. Organization and Administration of Student Services
- PSYC 661. Counseling Techniques
- AHRD 670. American Higher Education

School Counseling Program

Program Director: Dr. Debbie Sturm

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. Finally, 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.

School Counseling Master of Education Degree Requirements

Minimum Requirements	Credit Hours
PSYC 600. Introduction to Measurement and Statistics	3
PSYC 607. Assessment Procedures in Counseling	3
PSYC 614. Advanced Developmental Psychology	3
PSYC 640. School Counseling	3
PSYC 641. Prevention and Intervention in Schools	3
PSYC 642. Issues and Trends in K-12 Education	3
PSYC 660. Counseling Theories	3
PSYC 661. Counseling Techniques	3
PSYC 663. Substance Abuse Counseling	3
PSYC 664. Counseling Process	3
PSYC 665. Group Counseling	3
PSYC 669. Career Development	3
PSYC 685. Psychopathology: Diagnosis and Intervention Planning	3
PSYC 695. Practicum in Counseling	3
PSYC 710. Counseling Strategies	3
PSYC 749. Multicultural Perspectives of Intervention	3
PSYC 790. Internship	6
	54

School Psychology Program

Program Director: Dr. Tammy Gilligan

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.
- 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.

School Psychology Educational Specialist Degree Requirements –Level I

Minimum Requirements	Credit Hours
PSYC 525. Role and Function of the School Psychologist	3
PSYC 527. Psychological Foundations of Education	3
PSYC 605. Intermediate Inferential Statistics	3

PSYC 606. Measurement Theory	3
PSYC 618. Social and Emotional Development	3
PSYC 626. Advanced Developmental Psychopathology	3
PSYC 661. Counseling Techniques	3
PSYC 674. Assessment I	3
PSYC 695. Practicum in School Psychology	3
PSYC 749. Multicultural Perspectives of Intervention	3
PSYC 777. Assessment II	3
	33

School Psychology Educational Specialist Degree Requirements –Level II

Minimum Requirements	Credit Hours
PSYC 609. Applied Research Methods	3
PSYC 713. Professional Practice Issues in Rural School Psychology Practice	3
PSYC 750. Consultation and Intervention Techniques	3
PSYC 751. Psychotherapy with Children and Adolescents	3
PSYC 755. Cognitive and Behavioral Interventions	3
PSYC 778. Advanced Practicum in School Psychology	6
PSYC 779. Assessment III	3
PSYC 790. Internship in School Psychology	9
PSYC 800. Educational Specialist Research Project	6
PSYC 880. Introduction to Child and Adolescent Neuropsychology	3
READ 658. Principles, Practices and Applications of Reading Assessment	3
	45

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.

Psychological Sciences Program

Program Director: Dr. Michael Hall

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 credits)	
PSYC 700. Thesis Research (6 credits)	
Two additional courses as specified by concentration (6 credits)	
Content Courses (choose three of the following as specified by concentration):	9
PSYC 610. Applied Behavior Analysis (3 credits)	
PSYC 613. Cognitive Science (3 credits)	
PSYC 616. Social Psychology (3 credits)	
PSYC 624. Neuroscience (3 credits)	
PSYC 690. Experimental Analysis of Behavior (3 credits)	
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.

Behavior Analysis Concentration

Concentration Coordinator: Dr. Daniel Holt

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 a monthly concentration meeting 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.

Psychological Sciences Program Methods and Research Core (15 credits)

PSYC 605. Intermediate Inferential Statistics (3 credits)

PSYC 602. Psychological Research Methods (3 credits) or PSYC 606. Measurement Theory (3 credits)

PSYC 700. Thesis Research. The thesis must be an empirical study in either EAB or ABA. (6 credits)

PSYC 805. Single Case Experimentation (3 credits)

Content Courses (9 credits as approved by adviser)

PSYC 610. Applied Behavior Analysis (3 credits)

PSYC 613. Cognitive Science (3 credits) or PSYC 616. Social Psychology (3 credits) or PSYC 624. Neuroscience (3 credits)

PSYC 690. Experimental Analysis of Behavior (3 credits)

Concentration and Elective Courses (12 credits)

EXED 501. Behavioral Assessment (3 credits)

PSYC 695. Practicum (3 credits)

Electives (6 credits approved by concentration coordinator)

Students pursing BCBA exam eligibility will take the following two courses as electives:

- PSYC 601. Special Topics in Psychology when it is Ethics and Professional Development (3 credits)
- EXED 510. Systematic Behavioral Interventions (3 credits)

Students not pursing BCBA exam eligibility will have the option to take these or other courses, as approved by the adviser.

Applied Research Concentration

Concentration Coordinator: Dr. Robert Harmison

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 Program Methods and Research Core (15 credits)

PSYC 605. Intermediate Inferential Statistics (3 credits)

PSYC 608. Multivariate Statistical Methods in Psychology (3 credits)

PSYC 700. Thesis Research (6 credits)

One course chosen from the following:

PSYC 602. Psychological Research Methods (3 credits)

PSYC 606. Measurement Theory (3 credits)

PSYC 805. Single Case Experimentation (3 credits)

PSYC 836. Hierarchical Linear Models (3 credits)

PSYC 840. Mixed Methods (3 credits)

Content Courses (9 credits chosen from the following and approved by adviser)

PSYC 610. Applied Behavior Analysis (3 credits)

PSYC 613. Cognitive Science (3 credits)

PSYC 616. Social Psychology (3 credits)

PSYC 624. Neuroscience (3 credits)

PSYC 690. Experimental Analysis of Behavior (3 credits)

Concentration and Elective Courses (12 credits)

PSYC 695. Practicum (3 credits)

Electives (9 credits approved by adviser)

Experimental Psychology Concentration

Concentration Coordinator: Dr. Jeff Dyche

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 work in applied settings such as in the federal government.

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.

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.

Psychological Sciences Program Methods and Research Core (15 credits)

PSYC 605. Intermediate Inferential Statistics (3 credits)

PSYC 608. Multivariate Statistical Methods in Psychology (3 credits)

PSYC 700. Thesis Research (6 credits)

PSYC 602. Psychological Research Methods or another methods-related elective (e.g., PSYC 606, PSYC 805, PSYC 836, PSYC 840) approved by adviser (3 credits)

Content Courses (9 credits chosen from the following and approved by adviser)

PSYC 610. Applied Behavior Analysis (3 credits)

PSYC 613. Cognitive Science (3 credits)

PSYC 616. Social Psychology (3 credits)

PSYC 624. Neuroscience (3 credits)

PSYC 690. Experimental Analysis of Behavior (3 credits)

Concentration and Elective Courses (12 credits as approved by adviser)

Any content course listed above

PSYC 601. Special Topics (3 credits)

PSYC 604. Data Management and Analysis (3 credits)

PSYC 606. Measurement Theory (3 credits)

PSYC 805. Single Case Experimentation (3 credits)

BIO 504. Evolution (3 credits)

BIO 550. Neurobiology (3 credits)

CSD 523. Psychoacoustics (3 credits)

Other courses as approved by adviser

Quantitative Psychology Concentration

Concentration Coordinator: Dr. Sara J. Finney

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.

Psychological Sciences Program Methods and Research Core (15 credits)

PSYC 605. Intermediate Inferential Statistics (3 credits)

PSYC 606. Measurement Theory (3 credits)

PSYC 608. Multivariate Statistical Methods in Psychology (3 credits)

PSYC 700. Thesis Research (6 credits). The thesis must be an empirical study that either (a) focuses on an assessment, measurement or statistical issue or (b) demonstrates the application of sophisticated statistics or measurement techniques.

Content Courses (9 credits chosen from the following and approved by adviser)

PSYC 610. Applied Behavior Analysis (3 credits)

PSYC 613. Cognitive Science (3 credits)

PSYC 616. Social Psychology (3 credits)

PSYC 624. Neuroscience (3 credits)

PSYC 690. Experimental Analysis of Behavior (3 credits)

Concentration and Elective Courses (12 credits)

PSYC 604. Computer-Assisted Data Management and Analysis (3 credits)

PSYC 695. Practicum: Quantitative (3 credits)

PSYC 812. Assessment Methods and Instrument Design (3 credits)

Elective approved by adviser (3 credits)

Course Offerings

Psychology

PSYC 501. Workshop in Psychology. *1-3 credits.*
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 credits.*
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 credits.*
Psychological theories and research applied to classroom and school settings.

PSYC 530. The Psychology of Child Abuse and Neglect. *3 credits.*
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 credits.*
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 credits.*
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. *1-3 credits.*
In-depth study of current topics in the field of psychology. Content varies depending on the topic and instructor. May be repeated for different Special Topics. *Prerequisite: Permission of instructor.*

PSYC 602. Psychological Research Methods. *3 credits.*
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 credits.*
Provides an introduction to the management and analysis of data using statistical software packages. Emphasis is placed on planning data files, performing basic data transformations and statistical analyses, and transferring data across software programs. *Prerequisites: Completion of an undergraduate or graduate introductory statistics course and permission of instructor.*

PSYC 605. Intermediate Inferential Statistics. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
Provides an understanding of applied research methods, including Qualitative Research, Quasi-Experimental designs, and program evaluation. *Prerequisite: PSYC 605.*

PSYC 610. Applied Behavior Analysis. *3 credits.*
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 611. Comparative Psychology. *3 credits.*
Introduces graduate students to basic concepts, methods and theories in the study of animal behavior. Topics covered include the evolution of behavior, communication, sensory processes, reproductive behavior, parental behavior, sociality, aggression, territoriality and feeding behavior.

PSYC 612. Personality Theories. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 617. History of Psychology. *3 credits.*
The history of psychology as depicted through the development of American psychology. Consideration of the history of schools of psychology as well as the historical development of areas such as clinical, physiological, developmental, industrial, cognitive and social psychology.

PSYC 618. Social and Emotional Development. *3 credits.*
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 619. Cognitive Development. *3 credits.*
This course examines the characteristics of and processes through which thinking changes with development. Important research paradigms and theoretical perspectives, as well as various practical implications of related research will be explored. Topics include perception, memory, language, reasoning, individual differences, academic skills and selected applied topics.

PSYC 622. Abnormal Psychology. *3 credits.*
A critical review of the issues, research and etiological aspects of the mental disorders, as well as the general concepts used in the area of psychopathology. Topics include models of pathology and wellness, mind and body problems, and interprofessional relationships.

PSYC 624. Neuroscience. *3 credits.*
An analysis of brain/behavior relationships with an emphasis on neurological and biochemical mechanisms. Neuropsychological theory and psychopharmacology will be emphasized.

PSYC 626. Advanced Developmental Psychopathology. *3 credits.*
An overview of child and adolescent behavior disorders and psychopathology with an emphasis on diagnostic and treatment issues.

PSYC 630. Clinical Mental Health Counseling. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 643. Advanced School Counseling. *3 credits.*
A study of the role of the counselor in elementary, middle, and secondary schools with an emphasis on the function of counseling, consultation and coordination. Techniques and materials used with children, teachers and parents will also be examined. *Prerequisite: PSYC 640 or permission of instructor.*

PSYC 645. Student Personnel Services. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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. *Prerequisites: PSYC 660 and PSYC 661 or permission of instructor.*

PSYC 668. Couple and Family Systems. *3 credits.*
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 credits.*
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 credits.*
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. *1-3 credits.*
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 credits.*
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 credits.*
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. *1-6 credits.*
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 credit.*
Continued preparation in anticipation of the comprehensive examination. Course may be repeated as needed.

PSYC 699. Thesis Continuance. *1-2 credits.*
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. *3-6 credits.*
This course is graded on a satisfactory/unsatisfactory/in progress (S/U/I) basis.

PSYC 710. Counseling Strategies: Special Topics. *1-3 credits.*
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 credits.*
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 649 and permission of instructor.*

PSYC 727. Instructional Interventions: Science and Practice. *3 credits.*
Principles and research relevant to teaching and learning in 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 credits.*
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 transgendered individuals are addressed. *Prerequisite: PSYC 660, PSYC 661 or permission of instructor.*

PSYC 749. Multicultural Perspectives of Intervention. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
An introduction to the historical and contemporary context of play therapy including an overview 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 credits.*
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 credits.*
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 credits.*
A study of the various approaches to couple and family counseling, focusing on theory, techniques and research that relate to the counseling process. *Prerequisites: PSYC 661 and PSYC 668 or permission of instructor.*

PSYC 770. Assessment and Public Policy. *3 credits.*
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 credits.*
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. *1-6 credits.*
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 credits.*
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. *Prerequisites: PSYC 606, PSYC 674, and PSYC 777 or permission of instructor.*

PSYC 790. Internship. *3-6 credits.*
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. *1-2 credits.*
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. *1-3 credits.*
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 805. Single Case Experimentation. *3 credits.*
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 credits.*
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.

PSYC 812. Assessment Methods and Instrument Design. *3 credits.*
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 credits.*
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 credits.*
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. The American College Student. *3 credits.*
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. *Prerequisites: PSYC 606 and PSYC 608.*

PSYC 822. Assessment in Early Childhood Special Education. *3 credits. (Cross-listed as EXED 622.)*
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. *Prerequisites: Permission of the instructor and EXED 621 or equivalent.*

PSYC 825. Doctoral Seminar in Professional Psychology. *1-3 credits.*
This course covers issues and content designed to foster the development of the student's identity as a doctoral-level professional psychologist. Course is graded on S/U basis.

PSYC 826. Advanced Seminar in Developmental Psychopathology. *3 credits.*
This course reviews at the doctoral level current research and theory regarding childhood disorders, their origins, 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 credits.*
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. *Prerequisites: PSYC 604 and PSYC 605.*

PSYC 830. Structural Equation Modeling. *3 credits.*
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. *Prerequisites: PSYC 606 and PSYC 608.*

PSYC 832. Item Response Theory. *3 credits.*
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 834. Computers and Testing. *3 credits.*
This course focuses on the computer as a medium for the administration and scoring of achievement tests. Strengths and limitations of current computerized testing methods are addressed, as well as future issues and challenges. Topics to be discussed include linear and adaptive tests, problem simulations, performance assessment, and expert systems. *Prerequisites: PSYC 606 and PSYC 832.*

PSYC 835. Advanced Structural Equation Modeling. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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. Advanced Consultation and Supervision. *3 credits.*
An advanced course in models of consultation; supervision and leadership/management. *Prerequisite: Permission of instructor.*

PSYC 853. Advanced Supervision in Counseling. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 874. Cognitive Assessment. *3 credits.*
Students achieve basic understanding and competency in the administration and interpretation of intellectual and academic assessment procedures for children, adolescents and adults across a variety of settings 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 credits.*
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 877. Advanced Seminar In Child and Family Assessment. *3 credits.*
This doctoral-level course reviews advanced methods for the assessment of children and families, and focuses on the development of a case formulation that integrates test findings and informs intervention efforts.

PSYC 878. Doctoral Practicum. *1-6 credits.*
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. *3 credits.*
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 and analysis, maintenance and archiving of data, and report writing to presentation of findings. Course will be graded on an S/U basis.

PSYC 880. Introduction to Child and Adolescent Neuropsychology. *3 credits.*
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. *1-3 credits.*
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. *Prerequisites: PSYC 605 and PSYC 608 or equivalent, or permission of the instructor.*

PSYC 882. Doctoral Practicum in Counseling. *3 credits.*
Doctoral-level supervised clinical counseling experience in a field setting relevant to the students' professional goals. Course is graded on an S/U basis. *Prerequisite: Permission of the instructor.*

PSYC 889. Advanced Personality Assessment. *3 credits.*
Critical review of theory, practice and research with regard to personality assessment techniques. Emphasis will be placed on teaching the Rorschach and MMPI, and using these and other assessment procedures to answer specific diagnostic questions (e.g., depression, psychosis, personality disorders, etc.). *Prerequisite: PSYC 779 or equivalent.*

PSYC 890. Doctoral Internship. *6 credits.*
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. *Prerequisites: Completion of all course work and permission of program committee.*

PSYC 891. Doctoral Assessment Internship. *3 credits (can be taken for a second semester).*
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. *Prerequisites: Completion of all doctoral program course work, PSYC 878 and permission of the program committee.*

PSYC 892. Doctoral Internship in Counseling, Supervision and Teaching. *2-6 credits.*
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. *Prerequisites: Completion of all course work and permission of adviser.*

PSYC 895. Doctoral Practicum in College Teaching. *1-3 credits.*
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. *Prerequisites: Master's degree and permission of instructor.*

PSYC 899. Dissertation Continuance. *1-2 credits.*
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. *6-12 credits.*
Provides advanced research required of all doctoral candidates. Course is graded on an S/U basis. *Prerequisites: completion of all course work and permission of program coordinator.*

Public Administration

Department of Political Science

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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 pursing 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

The MPA program of James Madison University promotes engaged citizenship and public service responsive to diverse needs and perspectives. The program cultivates effective and ethical analysts, managers and leaders for work in local, national and global contexts.

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 42 credit hours of course work including six credits of internship. The internship can be waived for "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.

Master of Public Administration Degree Requirements

Core Curriculum	Credit Hours
PUAD 605. Research Design for Policy Evaluation	3
PUAD 606. Program Evaluation in Public Administration	3
PUAD 607. Policy Analysis	3
PUAD 620. Foundations of Public Administration	3
PUAD 625. Public Organizational Behavior	3
PUAD 630. Seminar in Public Personnel Administration	3
PUAD 641. Public Budgeting	3
Internship (choose one of the following):	6
PUAD 696. Internship in Public Administration	
PUAD 697. Internship in NGO Management	
Concentration course work (choose one of the following):	12
Management in International Nongovernmental Organizations [1]	
Nonprofit Management	
Public Management	
International Stabilization and Recovery	
Individualized Concentration	
Capstone Course: PUAD 692. Public Administration Capstone	3
	42

Concentrations

Management in International Nongovernmental Organizations [1]

Required Courses	Credit Hours
PUAD 650. Management in International Nongovernmental Organizations	3
MBA/PUAD 651. The International Non-Profit Sector	3
PUAD 652. The Politics of International NGO Management	3
PUAD 653. Ethics and International NGOs	3
	12

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.

Nonprofit Management

Required Courses	Credit Hours
Choose four of the following:	12
PUAD 571. Public Financial Management	
PUAD 572. Contract Management	
PUAD 574. Tools for Public Management	
PUAD 584. Environmental Regulatory Policy and Politics	
PUAD 615. Legal Environment of Public Administration	
PUAD 661. Civil Society and the Nonprofit Sector	
PUAD 662. Governance and Accountability of Nonprofit Sector Organizations	
PUAD 663. Philanthropy and Volunteerism	
	12

Public Management

Required Courses	Credit Hours
Choose four of the following:	12
PUAD 512. Seminar in Intergovernmental Relations	
PUAD 560. Regionalism and Urban Management	
PUAD 561. Education and Social Policy	
PUAD 562. Social Welfare and Local Government Policy	
PUAD 572. Contract Management	
PUAD 573. Economic and Community Development	
PUAD 574. Tools for Public Management	
PUAD 584. Environmental Regulatory Policy and Politics	
PUAD 615. Legal Environment of Public Administration	
	12

International Stabilization and Recovery Concentration

Required Courses	Credit Hours
Choose at least two of the following:	6-9
POSC 540. Post Conflict Societies	
PUAD 572. Contract Management	
PUAD 573. Economic and Community Development	
Choose one or two of the following:	3-6
POSC 665. Governance and Stabilization	
PUAD 560. Regionalism and Urban Management	
PUAD 571. Public Financial Management	
PUAD 626. Strategic Planning and Management	
PUAD 661. Civil Society in the Nonprofit Sector	
	12

Individualized Concentration

Required Courses	Credit Hours
Four graduate courses selected in consultation with the MPA director	12

Roanoke Program

Current and future leaders in the public and nonprofit sectors living in the Roanoke Valley have a unique opportunity to obtain their JMU Master of Public Administration degree through the Roanoke Higher Education Center (RHEC) in Roanoke, Va. Using the latest technologies, students receive the same high quality education and one-on-one attention from JMU professors as enjoyed by their Harrisonburg counterparts. Through the Roanoke M.P.A. program students acquire the administrative skills, political savvy, and public service ethic necessary to lead constructive change in their communities.

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	Credit Hours
*G*POSC 225. U.S. Government	4
PPA 265. Public Administration	3
POSC 295. Research Methods	4
PPA 359. Policy Analysis	3
	14

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	Credit Hours
Fall of Senior Year:	
PUAD 620. Foundations of Public Administration	3
PUAD 625. Public Organizational Behavior	3
Spring of Senior Year:	
PUAD 571. Public Financial Management	3
	9

Students must complete the following courses during the fifth year, followed by an internship in the summer.

Fifth Year Graduate Credit	Credit Hours
Fall of Fifth Year:	
PUAD 605. Research Design for Policy Evaluation	3
PUAD 630. Seminar in Public Personnel Administration	3
Two graduate course in the student's concentration	6
Spring of Fifth Year:	
PUAD 606. Program Evaluation in Public Administration	3
PUAD 641. Public Budgeting	3
PUAD 692. Public Administration Capstone	3
One graduate course in the student's concentration	3
Summer of Fifth Year:	
PUAD 696. Internship in Public Administration	6
	30

Total Graduate Credits	Credit Hours
Fourth Year Graduate Credit	9
Fifth Year Graduate Credit	24
Internship (summer of fifth year)	6
	39

Certificate in the Management of International Non-Governmental Organizations

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 course work 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	Credit Hours
PUAD 650. Management in International Nongovernmental Organizations	3
PUAD/MBA 651. The International Non-Profit Sector	3
PUAD 652. The Politics of International NGO Management	3
PUAD 653. Ethics and International NGOs	3
PUAD 697. Internship in NGO Management	6
	18

Financial Assistance

A limited number of graduate assistantships are available on a competitive basis. Assistantships are limited to nine paid graduate hours of tuition each fall and spring semester. Students must pay for any additional hours each semester at the tuition rate based on residency status.

All relevant regulations in the undergraduate and graduate catalogs are applicable.

Course Offerings

Public Administration

PUAD 512. Seminar in Intergovernmental Relations. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 571. Public Financial Management. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
This course is designed to introduce students to the practical tools that will enable them to deal with the challenges mangers 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 583. Emerging Issues in Public Administration. *3 credits.*
A detailed, research-oriented study of an emerging issue in public administration. The course will examine new or emerging topics in the public administration profession with extensive readings and research focused on the contemporary academic and professional literatures. The course may be repeated for credit with a change in subject matter. *Prerequisite: Permission of instructor.*

PUAD 584. Environmental Regulatory Policy and Politics. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 630. Seminar in Public Personnel Administration. *3 credits.*
An inquiry to 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 credits.*
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 of International Nongovernmental Organizations. *3 credits.*
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 instructor.*

PUAD/MBA 651. The International Non-Profit Sector. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
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 credits.*
This course will examine the role of philanthropy and volunteerism in the nonprofit sector in the US and globally.

PUAD 680. Reading and Research. *3 credits.*
Under faculty supervision, independent study of a specialized area of public administration. *Prerequisite: Permission of instructor.*

PUAD 683. Special Topics in Public Administration. *3 credits.*
A detailed study of a selected area in public administration. May be repeated with a change in subject matter. *Prerequisite: Permission of instructor.*

PUAD 692. Public Administration Capstone. *3 credits.*
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. *6 credits.*
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 credits.*
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 credit.*
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.

Sport and Recreation Leadership

School of Hospitality, Sport and Recreation Management
(540) 568-5174 www.jmu.edu/shsrm/srm/graduate

School Director
Dr. Michael O'Fallon

Graduate Program Director
Dr. Benjamin Carr

Associate Professors
B. Carr, J. Wallace Carr, D. Shonk

Assistant Professors
E. Anza, J. Pate

The concentration in sport and recreation leadership within the master's in kinesiology is administered through the School of Hospitality, Sport and Recreation Management.

Admission

In addition to The Graduate School qualifications for admissions, potential candidates must meet the requirements of the School of Hospitality, Sport and Recreation Management. For more information, see the application website.

Mission

The sport and recreation leadership program is designed to empower students with the education and skill sets necessary to succeed and become a leader in the sport or recreation industries.

The Department of Kinesiology offers a Master of Science degree with concentrations in exercise physiology, clinical exercise physiology, nutrition and exercise, and sport and recreation leadership. Each of the concentrations offer either thesis or non-thesis option.

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.

Sport and Recreation Leadership Concentration

Sport Leadership Track

The 33-credit hour Sport Leadership track is designed for students who wish to pursue a career in athletic administration or sport leadership in private, public, or non-profit agencies. Students who complete the Sport Leadership requirements are prepared to work at all levels of sport leadership including athletic administration. Graduates of this Sport Leadership track may find employment in positions in areas such as high school and college coaches, athletic directors, professional and amateur sport associations, public, private, and non-profit agency administrators and youth sports programs. An internship is required in this program.

Sport Leadership Requirements

Minimum Requirements	Credit Hours
KIN 570. Administration in Sport and Recreation Leadership	3
KIN 572. Facilities in Sport and Recreation Leadership	3
KIN 625. Social Issues in Sport and Recreation Leadership	3
KIN 631. Philosophy of Sport and Recreation Leadership	3
KIN 655. Research Techniques	3
KIN 675. Legal Aspects of Sport and Recreation Leadership	3
KIN 678. Theories and Issues of Coaching	3
KIN 685. Internship in Sport and Recreation Leadership	3-6
Approved electives or KIN 700. Thesis	6-9
	33

Recreation Leadership Track

The 33-credit hour Recreation Leadership track is designed for students who wish to pursue a career in Recreation management or leadership in private, public, or non-profit agencies. Students who complete the Recreation Leadership requirements are prepared to work at all levels of recreation leadership. Graduates of this Recreation Leadership track may find employment in positions in areas such as public, private, and non-profit agencies, commercial recreation, professional and amateur sport associations, theme parks, hospitality management, facility management, and youth sports programs. An internship is required in this program.

Recreation Leadership Requirements

Minimum Requirements	Credit Hours
KIN 570. Administration in Sport and Recreation Leadership	3
KIN 572. Facilities in Sport and Recreation Leadership	3
KIN 625. Social Issues in Sport and Recreation Leadership	3
KIN 631. Philosophy of Sport and Recreation Leadership	3
KIN 655. Research Techniques	3
KIN 673. Fiscal Management of Sport and Recreation Leadership	3
KIN 675. Legal Aspects of Sport and Recreation Leadership	3
KIN 685. Internship in Sport and Recreation Leadership	3-6
Choose one of the following:	6-9
Approved electives	
KIN 700. Thesis (6 credits) and one approved elective (3 credits)	
	33

Campus Recreation Leadership Track

The 33-credit hour campus recreation leadership track is designed for students who wish to pursue a career in campus recreation. Students who complete the campus recreation leadership requirements are prepared to work at all levels of campus recreation as well as national governing bodies such as NIRSA, event management, programming, and facility management. An internship is required in this program.

Campus Recreation Leadership Requirements

Minimum Requirements	Credit Hours
KIN 572. Facilities in Sport and Recreation Leadership	3
KIN 580. Human Resource Management and Development in Campus Recreation	3
KIN 581. Leadership in Recreation Professions	3
KIN 582. Programming and Operations in Campus Recreation	3
KIN 655. Research Techniques	3
KIN 673. Fiscal Management of Sport and Recreation Leadership	3
KIN 675. Legal Aspects of Sport and Recreation Leadership	3
KIN 685. Internship in Sport and Recreation Leadership	3
PSYC 646. The American College Student	3
Choose one of the following:	6
Six hours of approved electives	
KIN 700. Thesis (6 credits)	
	33

Course Offerings

See the Kinesiology section for course descriptions.

Strategic Leadership Studies

Strategic Leadership Studies
(540) 568-7020
ssls@jmu.edu
www.jmu.edu/leadership

Graduate Program Director
Dr. Karen Ford

Professors
D. Erwin, K. Ford

Assistant Professor
M. Sloan

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 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 resume that details your relevant job experience.
- three personal evaluations (including at least one from a current or former direct supervisor). An automated message with a link to the online survey will be sent to the three references listed on the application.
- two scholarly samples that demonstrate the applicant's ability to conduct research.

Top candidates will be invited for a personal interview as part of the final admission decision. Applicants are strongly encouraged to communicate with program faculty before applying.

Application Deadlines

The application deadline is March 1 for fall admission (preferred) and October 1 for spring admission. 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:

- K-12 Educational Leadership
- Postsecondary Analysis & Leadership
- Nonprofit & Community 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 educational, nonprofit and higher education administrators. Students will be instructed in management principles and 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 K-12 educational leadership, postsecondary analysis & leadership, or nonprofit & community leadership. Students in all concentrations study strategic management, advocacy and volunteerism, and advanced leadership dynamics.

Ph.D. in Strategic Leadership

Required Courses

Courses	Credit Hours
LEAD 700. Introduction to Leadership Studies and Ethics	3
Research Methodology and Evaluation Courses	
PSYC 605. Intermediate Inferential Statistics	3
PSYC 606. Measurement Theory	3
PSYC 608. Multivariate Statistical Methods in Psychology	3
LEAD/PSYC 770. Assessment and Public Policy or	3
LEAD 764 Leadership & Accountability for Nonprofit Organizations (for the nonprofit & community leadership concentration)	3
Business and Organizational Foundations Courses	
MBA 620. Accounting for Decision Making and Control	3
MBA 630. Financial Management	3
Three MBA electives [1]	9
Concentration Courses	
See below.	12
Advanced Courses	
MBA 690. Strategic Management	3
LEAD 710. Advocacy and Volunteerism	3
LEAD 890. Advanced Leadership Dynamics	6
LEAD 891. Externship in Advanced Leadership	3
LEAD 900. Dissertation	12
	66

1 Advanced statistics courses and/or LEAD 777 may satisfy this requirement with adviser approval.

Concentrations

The strategic leadership program offers three concentrations:

- K-12 Educational Leadership
- Postsecondary Analysis & Leadership
- Nonprofit & Community Leadership

K-12 Educational Leadership

The K-12 educational leadership concentration includes course work in learning theories and instructional models, curriculum development and evaluation, and advanced strategies for leading school organizations.

Required Courses	Credit Hours
LEAD 730. Advanced Learning Theories & Instructional Models	3
LEAD 735. Advanced Curriculum Theory	3
LEAD 741. Leading Educational Organizations	3
LEAD 800. Research Practicum	3
	12

Postsecondary Analysis & Leadership

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.

Required Courses	Credit Hours
LEAD 780. Policy Development and Analysis in Postsecondary Education	3
LEAD 785. Proseminar in Postsecondary Education	3
LEAD 800. Research Practicum	6
	12

Nonprofit & Community Leadership

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.

Required Courses	Credit Hours
LEAD 760. Proseminar in Principles of Nonprofit Organizations	3
LEAD 761. Civil Society and the Nonprofit Sector	3
LEAD 762. Proseminar in Nonprofit Organizational Governance	3
LEAD 763. Philanthropy and Resource Development	3
	12

Course Offerings

Strategic Leadership Studies

LEAD 700. Introduction to Leadership Studies and Ethics. *3 credits.*
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. *1-2 credits.*
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 credits.*
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 710. Advocacy and Volunteerism. *3 credits.*
This course is designed to enable students to understand the distinction among civic participation organizations and political advocacy.

LEAD 711. Effective College Teaching. *3 credits.*
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 credits.*
This course focuses on the design, delivery, assessment and supervision of instruction in schools, across schools, throughout the school division and in the community.

LEAD 735. Advanced Curriculum Theory and Instructional Issues. *3 credits.*
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.

LEAD 741. Leading Educational Organizations. *3 credits.*
Analyze, apply study of ethics, values & leadership concepts. Apply four ethical paradigms of justice, care, critique, and profession. Integrate, apply knowledge of educational laws, personnel supervision and education finance. Analyze change theory as related to cognitive and social processes & apply to school and org. change. Analyze the impact of personnel motivation, work performance and evaluation on school culture. Evaluate sociopolitical influences on leadership in schools.

LEAD 760. Proseminar in Principles of Nonprofit Organizations. *3 credits.*
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 credits.*
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. Proseminar in Nonprofit Organizational Governance. *3 credits.*
The structure, functions and composition of nonprofit boards and their relationship to organizational management and performance are investigated from a theoretical and leadership orientation. The fiduciary, strategic and generative governance roles of boards and common issues associated with nonprofit governance are examined from various perspectives. Strategies for improved board performance and accountability are explored. *Prerequisite: LEAD 760.*

LEAD 763. Philanthropy and Resource Development. *3 credits.*
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 & Accountability for Nonprofit Organizations. *3 credits.*
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. *Prerequisites: LEAD 760, LEAD 761, LEAD 762, LEAD 763 and PSYC 606 or equivalent.*

LEAD 777. Empirical Approach to Leadership Training and Development. *3 credits.*
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. *Prerequisites: PSYC 605 or equivalent.*

LEAD 780. Policy Development and Analysis in Postsecondary Education. *3 credits.*
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 782. Innovation, Entrepreneurship and Economic Development. *3 credits.*
This course will introduce students to the role institutions of higher education play in fostering innovative discoveries. A focus will be applied to financial, budgetary and economic development practices as they pertain to institutions of higher learning. Students will develop the attitudes, skills and knowledge necessary to recognize effective leadership in a dynamic, ever-changing higher education environment.

LEAD 785. Proseminar in Postsecondary Education. *3 credits.*
Encompasses the practice, theory, and empirical underpinnings of postsecondary education. Approaches may draw upon cultural, political, economic, historical, social and global aspects.

LEAD 800. Research Practicum. *3-6 credits.*
Focuses on principles of research design and planning in strategic leadership studies. Students will develop a defensible research topic, research plan, data collection, selection of methodology, and implications. May be repeated with instructor approval.

LEAD 890. Advanced Leadership Dynamics. *3 credits.*
This course 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 experiences with more advanced leadership concepts and applications.

LEAD 891. Externship in Advanced Leadership. *3 credits.*
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. *1-2 credits.*
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. *3-12 credits.*
Provides advanced research required of all doctoral candidates. Course is graded on an S/U basis.

Writing, Rhetoric and Technical Communication

School of Writing, Rhetoric, and Technical Communication

(540) 568-6004 www.jmu.edu/wrtc/graduate.html

Interim Academic Unit Head

Dr. Traci Zimmerman

Graduate Program Director

Dr. Michael Klein

Professors

L. Burton, M. Hawthorne, S. O'Connor, K. Schick, T. Zimmerman

Associate Professors

S. Aley, A. Crow, S. Ghiaciuc, M. Klein, S. Lunsford, M. Moghtader, E. Pass, M. Smith, J. Zimmerman

Assistant Professors

J. Almjeld, L. Bednar, S. McCarthy, C. Molloy, A. Parrish, V. Rouillon

Admission Criteria

In addition to satisfying all admission requirements of The JMU Graduate School, applicants must submit the following:

- 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 goals
- 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
- 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.

Nonnative speakers of English must take the Test of English as a Foreign Language and receive a score of at least 570 (paper) or 88 (electronic).

The application for the WRTC program opens October 15 each year. All application materials must be received by January 15 in order to ensure review by the program.

There are many areas on campus that offer assistantships, including WRTC. Graduate students interested in assistantships should go to JMU JobLink 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 programs combine 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 programs emphasize scholarly, humanistic and social scientific perspectives on the function and application of writing, rhetoric and technical communication.

Consequently, the programs provide 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 capstone hours (six credit hours), and six courses of WRTC electives (18 credit hours). 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 eechnology 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.

Capstone

Degree candidates have two options for satisfying the capstone requirement for the master's degree:

- Complete a traditional 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.

Master of Arts Degree Requirements

Course Requirements	Credit Hours
Core	9
WRTC 500. Critical Question in Writing, Rhetoric and Technical Communication	
WRTC 504. Professional Editing in Writing, Rhetoric and Technical Communication	
WRTC 508. Research Methods in Writing, Rhetoric and Technical Communication	
Thesis or Internship	6
WRTC 700. Thesis	
WRTC 701. Internship	
Choose at least six WRTC or other approved electives	18
WRTC 521. Web Design	
WRTC 550. Organizational Communication	
WRTC 555. Managerial Communication	
WRTC 570. Rhetorical Theory: Classical through Contemporary	
WRTC 581. Hypertext Theory	
WRTC 595. Special Topics in Writing, Rhetoric and Technical Communication	
WRTC 604. Ethics in Communication	
WRTC 608. Intercultural Literacies	
WRTC 610. Publication Management	
WRTC 612. Teaching Writing	
WRTC 624. Public Work of Rhetoric	
WRTC 625. Government Writing	
WRTC 628. Genre in Action	
WRTC 630. Legal Writing	
WRTC 640. Proposal and Grant Writing	
WRTC 644. Discourses in Health and Medicine	
WRTC 645. Documentation of Computer Technologies	
WRTC 648. Rhetoric of Science and Technology	
WRTC 650. Electronic and Online Publication	
WRTC 652. Communicating Science	
WRTC 655. Electronic Graphic Design	
WRTC 664. Critical Perspectives on Digital Culture	
WRTC 668. Interfaces and Design	
WRTC 680. Readings in Writing, Rhetoric and Technical Communication	

WRTC 690. Special Issues in Writing, Rhetoric and Technical Communication	
	33

Master of Science Degree Requirements

Course Requirements	Credit Hours
Core	9
WRTC 500. Critical Question in Writing, Rhetoric and Technical Communication	
WRTC 504. Professional Editing in Writing, Rhetoric and Technical Communication	
WRTC 508. Research Methods in Writing, Rhetoric and Technical Communication	
Thesis or Internship	6
WRTC 700. Thesis	
WRTC 701. Internship	
Educational Technologies Cognate	9
LTLE 570. Design and Development of Digital Media	
LTLE 610. Principles of Instructional Design	
LTLE 650. eLearning Design	
Choose at least three WRTC or other approved electives	9
WRTC 521. Web Design	
WRTC 550. Organizational Communication	
WRTC 555. Managerial Communication	
WRTC 570. Rhetorical Theory: Classical through Contemporary	
WRTC 581. Hypertext Theory	
WRTC 595. Special Topics in Writing, Rhetoric and Technical Communication	
WRTC 604. Ethics in Communication	
WRTC 608. Intercultural Literacies	
WRTC 610. Publication Management	
WRTC 612. Teaching Writing	
WRTC 624. Public Work of Rhetoric	
WRTC 625. Government Writing	
WRTC 628. Genre in Action	
WRTC 630. Legal Writing	
WRTC 640. Proposal and Grant Writing	
WRTC 644. Discourses in Health and Medicine	
WRTC 645. Documentation of Computer Technologies	
WRTC 648. Rhetoric of Science and Technology	
WRTC 650. Electronic and Online Publication	
WRTC 652. Communicating Science	
WRTC 655. Electronic Graphic Design	
WRTC 664. Critical Perspectives on Digital Culture	
WRTC 668. Interfaces and Design	
WRTC 680. Readings in Writing, Rhetoric and Technical Communication	
WRTC 690. Special Issues in Writing, Rhetoric and Technical Communication	
	33

Course Offerings

Writing, Rhetoric and Technical Communication

WRTC 500. Critical Questions in Writing, Rhetoric, and Technical Communication. *3 credits.*
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 credits.*
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 credits.*
Advanced study of research methodologies used in writing, rhetoric, and technical communication. Includes techniques used for collecting, sorting and analyzing information and data 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. *Prerequisites: WRTC 500 and WRTC 504.*

WRTC 521. Web Design. *3 credits.*
Web design study, emphasizing theories of evaluation, developing, revising, and maintaining websites; negotiating single-source documentation; and learning the various technological tools communicators use on the job. Students will learn to analyze audiences design needs, establish effective components of a website and justify design decision when working with clients. Students will learn to work through a professional and legal project cycle, and create and revise various genres of websites.

WRTC 550. Organizational Communication. *3 credits.*
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 555. Managerial Communication. *3 credits.*
Advanced study of how managers communicate in organizations by examining the various forms, contexts and functions of managerial written and verbal communication. Emphasizes the role of communication in management and the rhetorical guidelines followed by effective managers to design, write, revise and produce clear, concise and persuasive documents.

WRTC 570. Rhetorical Theory: Classical Through Contemporary. *3 credits.*
Study of the history of rhetoric with an emphasis on the use of language as a means of generating knowledge and of understanding, establishing and maintaining human communities. The course examines the rhetorical theories of major figures from the Classical Period through the present day.

WRTC 581. Hypertext Theory. *3 credits.*
Study of the history of hypertext, its theories and applications. Students will learn the characteristics and the structures of hypertext and navigational approaches to hypertext. The major theorists and designers of hypertext fiction and non-fiction will be explored and discussed. As well as learning about hypertext, students will apply their knowledge to create hypertext. They will also be encouraged to research and explore/create in other online environments (e.g., blogs, wikis, Second Life).

WRTC 595. Special Topics in Writing, Rhetoric and Technical Communication. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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. *Prerequisites: WRTC 504 and WRTC 508, or permission of instructor.*

WRTC 612. Teaching Writing. *3 credits.*
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 credits.
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 625. Government Writing. *3 credits.*
Advanced study of writing genres from a variety of fields within government. Examines the purposes, audiences and formats unique to government publications. Directs students in writing original and editing existing government documents.

WRTC 628. Genre In Action. *3 credits.*
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 credits.*
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. *Prerequisites: WRTC 504 and WRTC 508, or permission of instructor.*

WRTC 640. Proposal and Grant Writing. *3 credits.*
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 credits.*
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 645. Documentation of Computer Technologies. *3 credits.*
Advanced study of theory and practice in designing, writing and producing computer documentation for end users. Emphasizes documentation design and production, online documentation, usability testing, and writing of user's guide for computer hardware and software.

WRTC 648. Rhetoric of Science and Technology. *3 credits.*
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 650. Electronic and Online Publication. *3 credits.*
Advanced study of electronic and online publications, including World Wide Web pages, electronic newsletters and magazines, and online help. Emphasizes principles in designing, writing and producing publications using such current authoring tools as the hypertext mark-up language, HTML.

WRTC 652. Communicating Science. *3 credits.*
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 credits.*
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 credits.*
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 credits.*
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 Writing, Rhetoric and Technical Communication. *3 credits.*
Faculty-supervised reading, research and writing on advanced writing, rhetoric and technical communication projects not covered in regularly scheduled courses.

WRTC 690. Special Issues in Writing, Rhetoric and Technical Communication. *3 credits.*
Advanced writing and research in a variety of writing, rhetoric and technical communication genres, including government writing, medical writing, legal writing, and proposal and grant writing. Examines special and timely issues currently being explored in WRTC that are not addressed in sufficient depth in regularly scheduled WRTC courses. *May be repeated with different course content and permission of director.*

WRTC 699. Thesis/Internship Continuance. *2 credits.*
Individual reading, research and writing associated with completion of major's thesis/internship portfolio. Directed by the chair of the student's thesis/internship committee and required for graduation. *Prerequisites: WRTC 500, WRTC 504, WRTC 508, successful completion of the comprehensive exam, and permission of thesis/internship committee director. Students who have registered for six hours of thesis/internship credit but have not finished the thesis/internship must be enrolled in this course each semester until the thesis/internship is completed. This course is graded on a satisfactory/unsatisfactory (S/U) basis.*

WRTC 700. Thesis. *6 credits.*
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. *Prerequisites: 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. *6 credits.*
Experiential learning integrating knowledge and theory learned in writing, rhetoric and technical communication courses with practical application and skills development in a professional setting. Students observe, analyze and reflect upon communication processes and apply effective written, interpersonal and public communication skills. Supervised by the director of the student's internship committee in conjunction with a client, students develop a significant, large-scale professional project. *Prerequisites: 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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